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ENVIRONMENTAL PRIORITIES INITIATIVE
PRELIMINARY ASSESSMENT OF
ARCO CHEMICAL COMPANY
PREPARED UNDER

TDD NO. F3-8910-26
EPA NO. PA-2600
CONTRACT NO. 68-01-7346

FOR THE

HAZARDOUS SITE CONTROL DIVISION
U.S. ENVIRONMENTAL PROTECTION AGENCY

MAY 1, 1990

NUS CORPORATION
SUPERFUND DIVISION

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SECTION 1

1.0 INTRODUCTION

1.1 Authorization

NUS Corporation performed this work under Environmental Protection Agency Contract No. 68-01-7346. This specific report was prepared in accordance with Technical Directive Document No. F3-8910-26 for the Arco Chemical Company site, located in Newtown Square, Pennsylvania.

1.2 Scope of Work

NUS FIT 3 was tasked to conduct an Environmental Priorities Initiative (EPI) preliminary assessment of the subject site.

1.3 Summary

The site is the location of the Arco Chemical Company world headquarters. The 313-acre facility supports administration and corporate offices, as well as an active research and engineering center. The focus of the research and engineering divisions is to re-engineer old processes and to develop new processes in support of the manufacture of chemicals, plastics, and polymers. No commercial chemical manufacturing facilities are located at this site. A wide variety of wastes and waste quantities are generated by the analytical laboratories, small bench-scale units, and large pilot plants. Wastes from the analytical laboratories consist primarily of small vials (approximately 20 to 100 milliliters), compared to wastes from the larger pilot plants, which are produced in drum quantities.

Two water companies supply water within the study area. The Philadelphia Suburban Water Company (PSWC) has one surface water source within the three-mile radius of the site. The surface intake at Geist Reservoir-Crum Creek is located 5.7 stream miles south-southeast and downgradient of the site. PSWC has no groundwater sources in the study area. The Media Water Company has no surface water or groundwater sources within the study area. No home wells were identified within the vicinity of the site.

Four solid waste management units (SWMUs) have been identified at the facility: the solvent comping room, the drum storage area, the pilot plant temporary storage area, and the non-sanitary-effluent-handling system. In the solvent comping room, waste solvents are received and consolidated in 55-gallon drums. The drum storage area receives tagged and drummed hazardous wastes prior to shipment off site for disposal and incineration. The pilot plant temporary storage area is used as short-term storage for hazardous wastes prior to placement in the drum storage area. The non-sanitary-effluent-handling system manages process wastewater and recyclable process wastewater. No spills or releases have been reported for any SWMU. For a detailed description of each of the above-mentioned SWMUs, please refer to section 4.0 of this report.

SECTION 2

2.0 THE SITE

2.1 Location

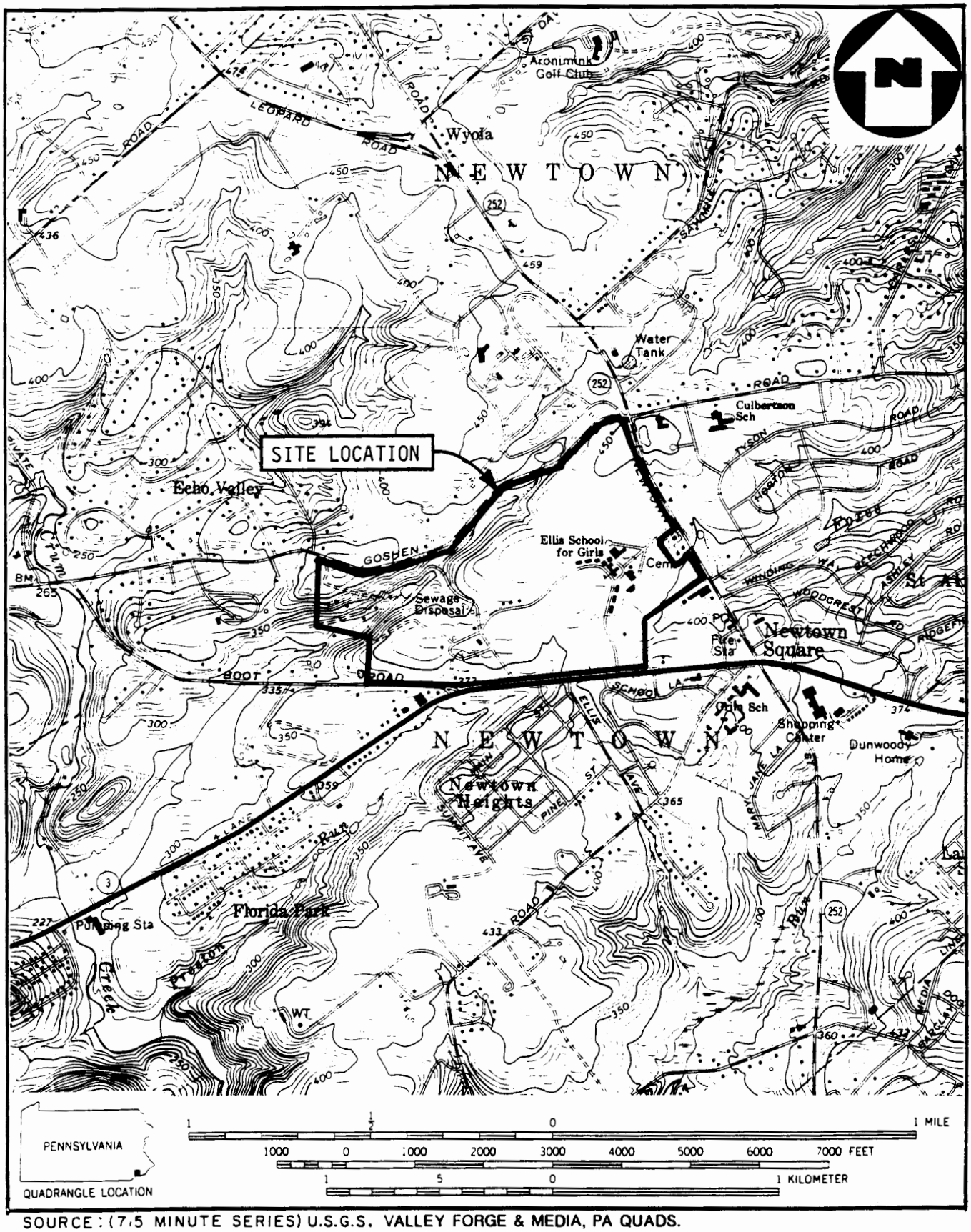
The Arco Chemical Company facility is located in Newtown Square, Delaware County, Pennsylvania (see figure 2.1, page 2-2). The site coordinates are north 39° 59' 25" latitude and west 75° 24' 31" longitude. The site can be located on the United States Geological Survey (U.S.G.S.) Media, Pennsylvania quadrangle topographic map by measuring 4-3/4 inches west and 1-3/4 inches south from the northeastern corner of the quadrangle.[1]

2.2 Site Layout

The Arco Chemical Company site is located on 313 acres; an additional 22-acre parcel at the northwestern intersection of Routes 3 and 252 is leased to area businesses (see figure 2.2, page 2-3). Route 3 (West Chester Pike) runs along the southern perimeter of the property. The northern property boundary is Goshen Road. Reeses Run meanders along the north-northwestern perimeter of Arco's property. A chain-link fence surrounds the property, and all entrance roads have gates and security guards.[2]

The industrial/office complex is located in the central portion of the property, on approximately 30 acres. The main office/laboratory complex is an internally connected two-story structure. All storage and support facilities are directly behind or north-northwest of the main office/laboratory complex.[2]

Storm drains are directed to the east and west from the center of the site. The storm water drains initially flow into non-mechanical oil/water separators. The eastern line then flows into the east retention basin, which also receives roof drainage and runoff water. From the east retention basin, discharge is directed to the Newtown Square Township stormwater runoff system. The western line, after flowing through an oil/water separator, goes into the west detention basin. From the west detention basin, the water is discharged into Reeses Run.[2,3]



SOURCE: (7.5 MINUTE SERIES) U.S.G.S. VALLEY FORGE & MEDIA, PA QUADS.

FIGURE 2.1

SITE LOCATION MAP

ARCO CHEMICAL, NEWTOWN SQUARE, PA

SCALE 1: 24000

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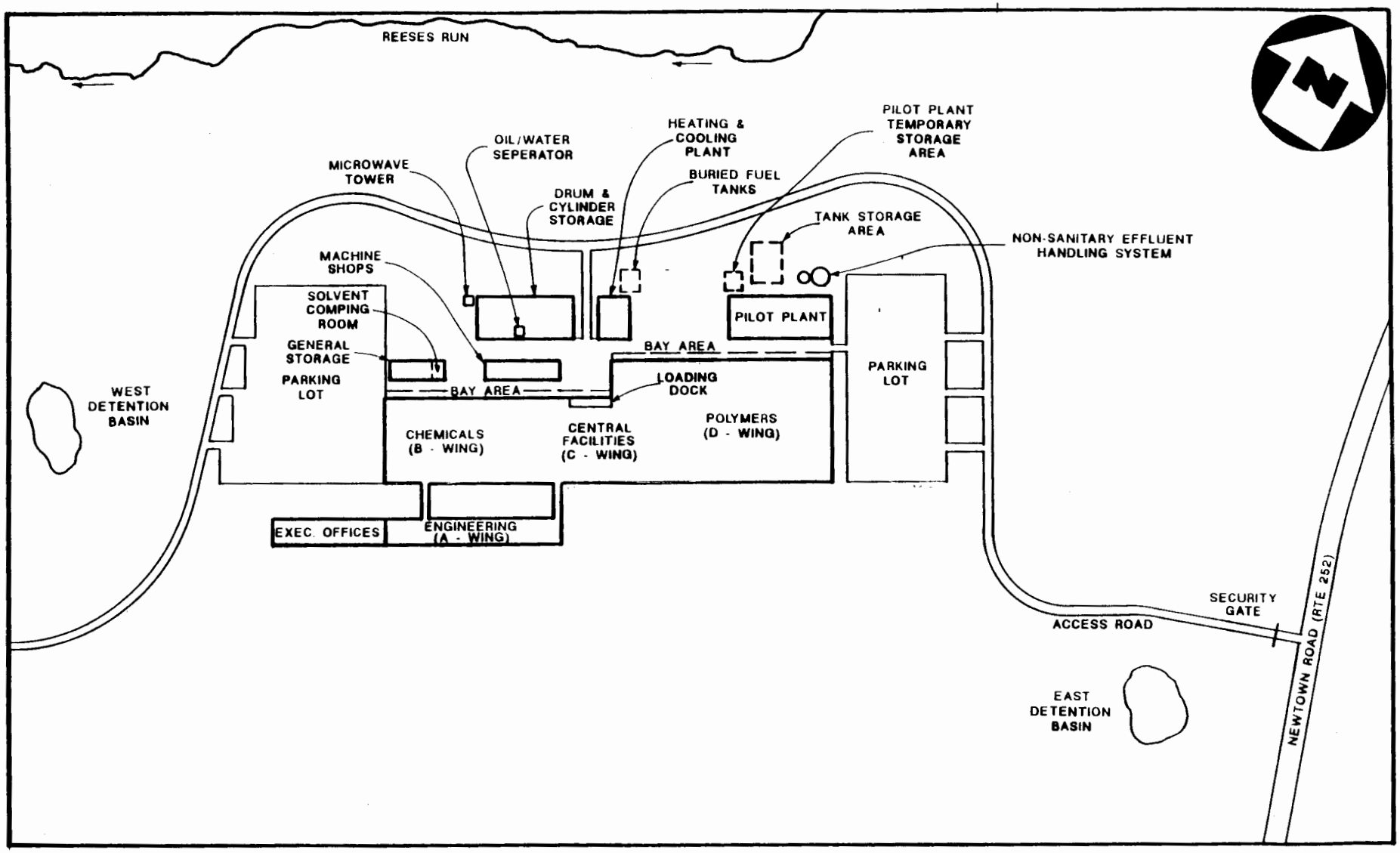

SITE SKETCH

ARCO CHEMICAL, NEWTOWN SQUARE, PA

(NO SCALE)

FIGURE 2.2

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Arco Chemical's buildings have a total gross area of approximately 577,000 square feet. The main two-story building is divided into five wings: the newly constructed executive office wing, the A wing or engineering division, the B wing or chemical research division, the C wing or central facilities division, and the D wing or polymer research division. Behind the main building, in a line from west to east, lie a number of storage, pilot plant, and support facilities, including the general storage building, which also houses the solvent comping room; a microwave tower; the drum and cylinder storage area; the machine shop; the heating and cooling plant, behind which lies buried fuel tanks; a truck-loading dock; a large pilot plant; the tank storage area; and the non-sanitary-effluent-handling system. Employee parking lots are east and west of the main building.[2]

The executive office wing and the engineering division (A wing) are administrative offices.[2]

The chemical research division (B wing) contains a series of corridors, which divide the research laboratories. Within these corridors, waste solvents are stored in tagged, five-gallon gas-can-type containers. Smaller laboratory-pack wastes are tagged and stored in their containers in plastic trays awaiting pickup. The second floor consists of offices, and there is a small pilot plant area on the ground floor.[2,3]

The C wing (central facilities division) consists of administrative support offices.[2]

The D wing (polymer research division) is similar in layout to the B wing. The polymer laboratories on the first floor are separated by corridors where wastes solvents are tagged and collected. The second floor of D wing houses the analytical services laboratories, which are divided into a series of seven corridors. Solvents are collected in five-gallon containers or 1/2-gallon amber bottles, which are tagged and collected.[2,3]

Behind the main building, there is a bay area where pilot plant wastes are containerized and tagged awaiting pickup. Surface water drains were observed in the bay area.[2,3]

The solvent comping room is attached to the general storage area. All solvent wastes are brought here from point of origin and are consolidated here for shipment to an off-site mercury-recycling plant.[2,3]

The drum and cylinder storage area is an open-air structure, with a sloped roof, that is approximately 230 by 100 feet in size. One-third of this area is used to store wastes; the remainder is used to store feedstock chemicals. There is a one-foot cement berm on three sides of the building's perimeter. The floor has cement pads, which slope inwardly toward floor drains. The drains empty into a small oil/water separator, separate and distinct from the storm water management system. The small oil/water separator is located in the center of the drum storage area. The water then flows into the process wastewater system. A microwave tower is beside and west of the drum and cylinder storage area.[2]

The machine shop fabricates sheet metal and pipe for the facility's internal use. It is located between the B wing and the drum storage area.[2]

The heating and cooling plant provides heating, ventilation, and air-conditioning services for the facility. It is located between the drum storage area and the large pilot plant. A boiler stack and buried fuel tanks associated with the heating and cooling system are directly behind the plant.[2,3]

The truck-loading dock services the main building and associated pilot plants.[2]

A large pilot plant is located in the northeastern portion of the facility. Behind the pilot plant is the tank storage area and the non-sanitary-effluent-handling system. Two tanks are located in the tank storage area; both tanks are associated with the large pilot plant operations. A 2,000-gallon stainless-steel tank and an approximately 500-gallon fiberglass tank are used intermittently to support the large pilot plant.[2,3]

The non-sanitary-effluent-handling system is a system that enables Arco to reuse relatively clean wastewater from laboratory sinks as recycled process water. In this area are a 36,000-gallon equalization tank and a 142,000-gallon interim storage tank.[2,3]

2.3 Ownership History

Arco Chemical Company purchased the facility property in approximately 1978. Construction began in 1979; staffing operations began in 1980. Before Arco's purchase, the site was the Charles Ellis School for Girls from 1921 until 1977. The land was two separate farms before 1921.[3]

2.4 Site Use History

The site is currently used as Arco Chemical Company's world headquarters and is organized into administrative business and corporate offices and an active research and engineering center. The research and engineering sections work to develop new processes and re-engineer old processes in support of the manufacture of specialty and commodity chemicals, polymers, and plastics. Most of these applications are ultimately used in the automobile, housing, and packaging industries. Approximately 1,000 employees are on site; one-half of them are involved with the research and engineering divisions.[3]

The Charles Ellis School for Girls used the property from 1921 through 1977 as its campus. Before 1921, the property supported two separate farms.[3]

2.5 Permit and Regulatory Action History

Arco Chemical currently generates hazardous waste under EPA I.D. No. PAD046538211. Waste codes, as reported in the facility's Notification of Hazardous Waste Activity Form and Part A of the Hazardous Waste Permit Applications, include the following: F003 (spent nonhalogenated solvents), D002 (corrosive waste), D001 (ignitable waste), F004 (spent nonhalogenated solvents), and F005 (spent nonhalogenated solvents). Process codes utilized by the facility, as per these forms, were identified as S01, S02, and T03. A subsequent update of the Notification of Hazardous Waste Activity Form on January 30, 1986 included U012 (aniline), U135 (2,4-dinitrotoluene), U107 (di-n-octyl phthalate), U122 (formaldehyde), U134 (hydrogen fluoride), U147 (maleic anhydride), U169 (nitrobenzene), U196 (pyridine), and U223 (toluene diisocyanate).[4,5,6]

On July 25, 1980, Arco Chemical submitted a Notification of Hazardous Waste Activity to EPA for the subject site. At this time, the facility was assigned the temporary EPA I.D. No. PAT000607770. On November 14, 1980, the facility filed Part A of the Hazardous Waste Permit Application. On July 17, 1981, EPA acknowledged the facility's interim status and identified waste codes F003, D002, D001, and F004 as the hazardous waste codes that could be handled on site.[7]

The process codes S01, with design capacity of 100,000 gallons, S02, with a design capacity of 6,500 gallons, and T03, with a design capacity of 20 gallons per hour, were listed as the only treatment, storage, or disposal (TSD) processes that the facility could utilize. On December 30, 1981, EPA issued Arco Chemical the permanent I.D. No. PAD046538211.[8]

On February 16, 1983, the Pennsylvania Department of Environmental Resources (PA DER) requested that the facility submit Part B of the Hazardous Waste Permit Application.[9] Arco Chemical responded to this request on August 11, 1983, stating that Arco would not store hazardous waste in its drum storage area for greater than 90 days. In addition, Arco Chemical requested that further processing of their application be terminated.[10] All permit-related correspondence is included in appendix A.

Available correspondence in PA DER file information indicates that four hazardous waste facility inspections have been conducted. Only one inspection found the site in noncompliance, because of improper labeling. These conditions were rectified in one working day.[11] Copies of the inspection reports are included in appendix B.

Arco Chemical was permitted (permit no. 400401) to burn high BTU solvents in an on-site incinerator. However, Arco Chemical never put this incinerator into operation.[3]

2.6 Remedial Action to Date

No remedial action has been taken at the facility to date.[3]

SECTION 3

3.0 ENVIRONMENTAL SETTING

3.1 Water Supply

Residents within the three-mile radius of the site receive their water from two water supply companies or from domestic wells.

PSWC supplies water to the Chester County townships of Easttown and Willistown and the Delaware County townships of Edgemont, Newtown, Marple, and Radnor.[12,13] PSWC has one water source within the three-mile radius of the site. The closest surface intake is the Geist Reservoir-Crum Creek intake (located 5.7 stream miles south-southeast and downgradient of the site); the other intakes are the Schuylkill River and Perkiomen Creek in Montgomery County, Pickering Creek in Chester County, and the Neshaminy and Ironworks Creeks in Bucks County. PSWC has 24 groundwater wells in Chester County, 15 wells in Montgomery County, and a vertical, groundwater-fed reservoir in Upper Merion in Montgomery County. PSWC serves approximately 833,997 people (219,473 service connections times 3.8 people per connection) and has an average daily sendout of 88 million gallons.[12]

The Media Water Company (MWC) supplies water to Media and Upper Province Township in Delaware County. MWC utilizes two surface intakes and one emergency groundwater well for its supply. MWC's main intake is on Ridley Creek, 0.1 mile south of Baltimore Pike (approximately 5.2 miles south of the site). This intake has an allocation of three million gallons per day (mgd). The other intake is on Chester Creek, well outside the three-mile radius of the site, and is used very infrequently.[14] MWC's lone groundwater well, completed in the Wissahickon Formation, is located 0.5 mile north of Baltimore Pike on Ridley Creek Road, across from Rosemary Circle (approximately 4.7 miles south of the site).[15] Water from this back-up well, which is 500 feet deep, is integrated into the system when it is used.[16,17] The well was last used in 1978 but is being maintained for use during a severe drought.[18] MWC has an interconnection with the Chester Water Authority, whose main sources of water are located at least 30 miles away. [15] MWC serves approximately 45,000 persons.[14]

There are no home wells within the study area.[2]

3.2 Surface Waters

Surface waters from the Arco property are directed into the west retention basin, which discharges into Reeses Run at the northwestern edge of Arco's property line.[2,3] Approximately 1.25 stream miles from the point of discharge, Reeses Run flows into a palustrine wetland of approximately five acres. Reeses Run joins Crum Creek 1.75 stream miles from Arco's point of discharge. Crum Creek, which flows in a southeastward direction, is classified as a cold-water fishery.[19,20] Approximately 2.5 stream miles from the confluence of Reeses Run and Crum Creek, Crum Creek enters a lacustrine littoral wetland, which occupies the northwestern portion of Geist Reservoir. Geist Reservoir, a permanent lacustrine limnetic wetland, is approximately 5.7 stream miles from Arco's point of discharge.[19] Geist Reservoir is a surface water intake source for PSWC.[12]

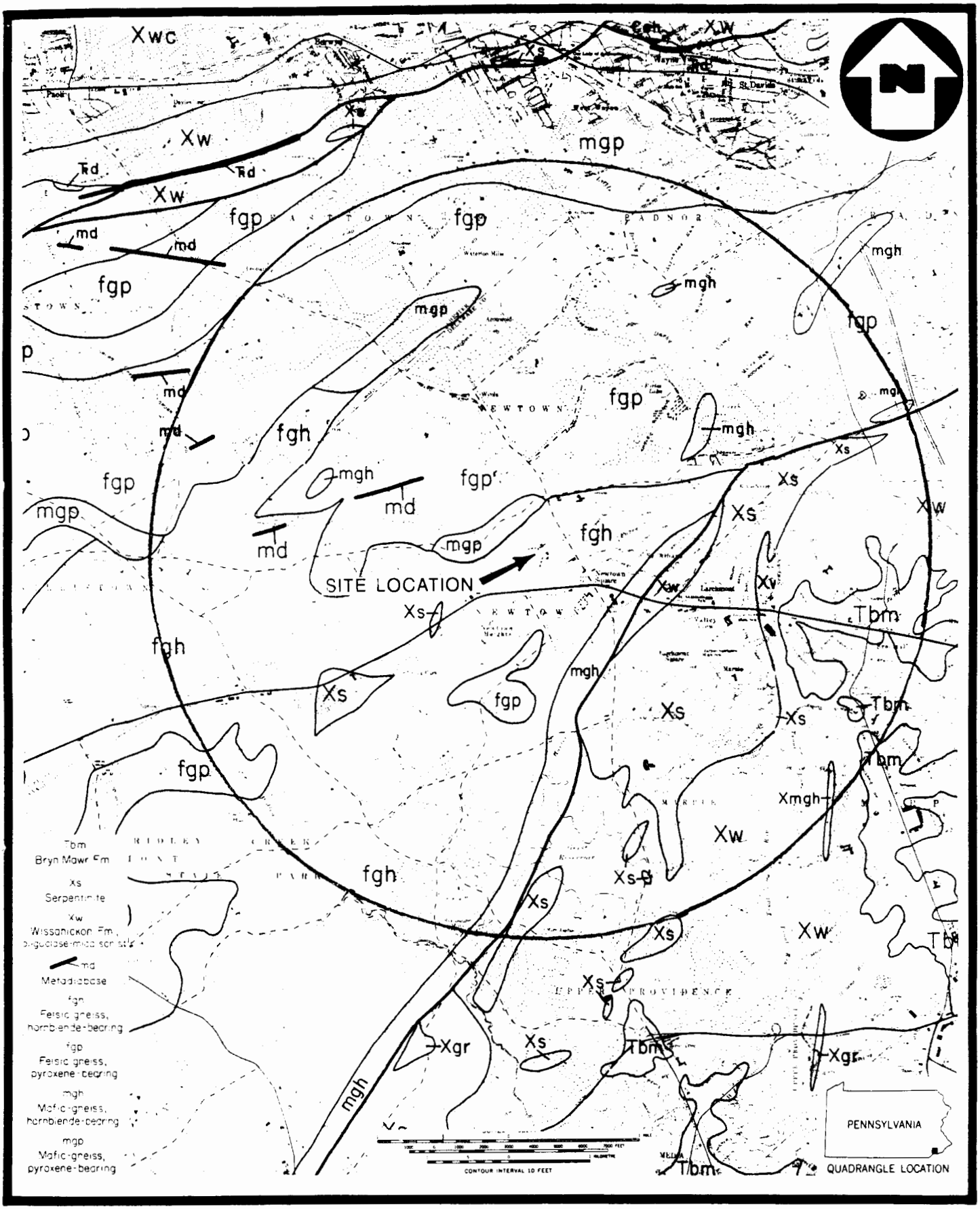
3.3 Hydrogeology

The geologic and hydrogeologic conditions in the study area were researched as part of the site investigation. A preliminary literature review was conducted to determine surface and subsurface geologic conditions, soil character, and the status of groundwater transport and storage.

3.3.1 Geology

The Arco Chemical Research and Engineering Company site is located within the Piedmont Uplands Section of the Piedmont Physiographic Province.[21] The vast majority of rocks in the study area are Precambrian in age and are chiefly metamorphosed sediments but also include considerable amounts of igneous rocks.[13] Because they are in an active position in the Appalachian geosyncline, these rocks have been intensively folded and faulted. The site area is maturely dissected and has a rolling topography. The drainage pattern is entirely dendritic.[22]

The site is entirely underlain by one of two species of Precambrian age felsic gneiss (see figure 3.1, page 3-3).[16] These rocks are essentially medium-grained aggregates of quartz, feldspar, and iron-bearing silicates in varying proportions.[23] The felsic gneiss, both the pyroxene-bearing and hornblende-bearing species, are also known as granitic gneiss. These rocks are light buff to light pink and fine to medium grained and have mineral grains approximately one millimeter in diameter. They are composed of quartz, microcline, hornblende, and minor amounts of biotite.[24] The thickness of these units is unknown.[22]



SOURCE: ATLAS OF PRELIMINARY GEOLOGIC QUADRANGLE MAPS OF PENNSYLVANIA

FIGURE 3-1

GEOLOGIC MAP

ARCO CHEMICAL RESEARCH AND ENGINEERING COMPANY SITE

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Cropping out largely 0.25 mile northwest and 0.7 mile southeast of the site (but also scattered throughout the three-mile radius) are two species of Precambrian age mafic gneiss.[16] The mafic gneiss, both pyroxene-bearing and hornblende-bearing species, is also known as gabbroic gneiss and gabbro. These rocks are a dark color and medium to fine grained and contain calcic plagioclase, hypersthene or augite, and up to 30 percent quartz.[24] The thickness of these units is unknown.[22]

Cropping out 0.85 mile southeast of the site is the Precambrian or Lower Paleozoic age (actual age is uncertain) Wissahickon Formation.[16] The facies present in the study area is an oligoclase-mica schist, a finely plicated, medium-grained dark gray rock composed of biotite, muscovite, and quartz with a variable amount of feldspar and chlorite. Distinct veins of quartz are interbanded in the schist, and cleavage/jointing are conspicuous.[22,25] Because of the intense folding and lack of recognizable recurrent beds, the thickness of the Wissahickon is not known (the estimated thickness ranges from 8,000 to 10,000 feet).[22]

Scattered throughout the three-mile radius of the site are Precambrian age serpentinite and metadiabase; these are intrusive igneous rocks that formed sills and dikes throughout the study area.[16] The serpentinite is a magnesium-rich rock derived from pyroxenite and periodotite. It is usually green in color and can be fibrous. The metadiabase is dark greenish gray to almost black in color and consists of augite, feldspar, and magnetite. The rock has been extensively altered by metamorphism. The thickness of individual dikes and sills can vary from a few inches to tens of feet.[22,24]

Cropping out in the southeastern corner of the study area is the lower Miocene age Bryn Mawr Formation. The Bryn Mawr Formation is a white, yellow, and brown gravel and sand with a maximum thickness of 20 feet.[24]

3.3.2 Soils

The site is underlain by a Glenelg Series soil. This soil (GeB2 - three to eight percent slopes, moderately eroded) is a moderately deep, well-drained channery silt loam that formed in material weathered mainly from granite, gneiss, and mica schist. A representative profile consists of a top 8 inches of a dark brown channery silt loam, 13 inches of a dark brown heavy silt loam, 5 inches of a strong brown micaceous silt loam, 6 inches of a strong brown micaceous loam, and 10 inches of a reddish-brown micaceous loam. The soil has a moderate permeability, a moderate available water capacity, and a pH range of slightly acid to neutral (6.2 to 6.8).[26]

3.3.3 Groundwater

The felsic gneiss (granitic gneiss) has a very low porosity and low permeability.[24] No groundwater data exist for this rock unit in Chester County.[22] Elsewhere, felsic gneiss has a median yield of less than 20 gallons per minute (gpm), although yields of 35 gpm and more can be obtained in properly sited wells between 100 to 200 feet deep.[24] It is likely that the gneiss is hydraulically interconnected with the other rock units in the study area via its moderately abundant joints and fractures.

The expected direction of shallow groundwater flow is to the southwest. Flow direction is based upon topographical observations.

3.4 Climate and Meteorology

The average daily maximum temperature of the area is 63.2°F. The average daily minimum temperature is is 42.1°F. The average annual precipitation is 45.73 inches; the greatest precipitation is in July, with an average of 4.48 inches, and the lowest is in February, with 2.96 inches. The mean annual evaporation for the area is estimated to be 35 inches; therefore, the average yearly net precipitation for the area is 10.73 inches. A 1-year, 24-hour rainfall is expected to produce 2.5 inches.[27,28,29,30]

3.5 Land Use

Land use to the north, east, and west, in the vicinity of the site, is primarily residential. Along the southern property border and to the southeast of the site, there is a dense concentration of commercial development.[1,2]

Ridley Creek State Park is approximately 2.5 miles southwest of the site. Geist Reservoir is located approximately two miles south of the site.[1,2]

3.6 Population Distribution

The population of the study area was estimated using information from Rand McNally and by using the house-count method (the total number of homes counted was multiplied by 3.8 residents). There are 12,353 people residing within 1 mile of the facility. There are 8,981 people living between 1 and 2 miles away, while 17,536 people reside 2 to 3 miles from the facility. The total number of residents in the 3-mile radius is 38,870.[1,31]

3.7 Critical Environments

No critical habitat for endangered species was identified within the study area; however, two federally listed endangered species are expected to be found as transients. They are the bald eagle (Haliaeetus leucocephalus) and the peregrine falcon (Falco peregrinus).[32]

Palustrine and lacustrine wetlands exceeding five acres in size are mapped within the study area; both areas are downstream of the site. One area, an emergent palustrine, is estimated to be five acres in size and is mapped 1.25 stream miles southwest of the site. A second area is mapped as lacustrine littoral and is approximately 10 acres in size. This larger area is 4.25 stream miles south of the site.[19]

The Pennsylvania Natural Diversity Inventory has identified three plant species of special concern within the study area. The tawny ironweed (Vernonia glauca) can be found within a two- to three-mile radius of the site and has a tentatively undetermined state status. The tawny ironweed is believed to be in danger of population decline. The putty root (Aplectrum hyemale) and cranefly orchid (Tipularia discolor) can be found within a three- to four-mile radius of the site and have a state status listed as Pennsylvania rare.[33]

SECTION 4

4.0 WASTE TYPES AND QUANTITIES

Hazardous wastes generated on site have been classified by the facility as one of the following EPA RCRA waste identification numbers: U169 (nitrobenzene), U196 (pyridine), U105 (1-methyl-2,4-dinitrobenzene), U147 (maleic anhydride), U012 (aniline), U134 (hydrogen fluoride), U223 (toluene diisocyanate), U107 (di-n-octyl phthalate), U122 (formaldehyde), and the following halogenated and nonhalogenated solvent wastes from non-specific sources: F001 (spent halogenated solvents), F002 (spent halogenated solvents), F003 (spent nonhalogenated solvents), F004 (spent nonhalogenated solvents), and F005 (spent nonhalogenated solvents). The waste codes presented were derived from the facility's updated Notification of Hazardous Waste Activity and may not totally represent all wastes currently on site.[4,5,6]

According to Larry Taylor, manager of material management, Arco's hazardous waste streams can be divided into four quantities. Approximately 5,000 gallons of high BTU recyclable wastes are generated every six weeks. These wastes are removed by Oldover Corporation (EPA I.D. No. VAD098443-443), of Virginia, or Safety Kleen Corporation (EPA I.D. No. NJD002182897), of New Jersey. Solid wastes composed primarily of crushed cans, glass, charcoal filters, and syrupy styrene are shipped/disposed through Chemical Waste Management, Incorporated (EPA I.D. No. ALD000622464), of Alabama. Laboratory packs containing small volumes of highly variable materials are removed from the site by Advanced Environmental Technical Corporation (EPA I.D. No. NJD080631369), of New Jersey. The laboratory packs and drums are carted to Thermal Chem in South Carolina for incineration.[3] Aqueous wastes totaling approximately 5,000 gallons per year are removed by ECOFLO, Incorporated (EPA I.D. No. NCD980842132), of North Carolina. The types of aqueous wastes vary depending on the pilot plant process or function.[3]

Process wastewater (between 80,000 to 100,000 gallons per day) is monitored for pH and is then discharged after working hours, into the Delaware County Regional Authority (DELCORA) sewer system.[3]

4.1 Solid Waste Management Units

Four SWMUs have been identified for the site: the solvent comping room, the drum storage area, the pilot plant temporary storage area, and the non-sanitary-effluent-handling system. Of the four, three are hazardous waste storage areas: the solvent comping room, the drum storage area, and the pilot plant temporary storage area.[3]

4.1.1 SWMU No. 1
Solvent Comping Room

The solvent comping room is attached to the general storage building located behind the B wing, or chemical research division. At the time of the site visit, one 55-gallon drum was present. The physical dimensions are approximately 45 by 15 feet, and the room consists of a cement floor, 3 cement walls, and 1 brick wall. Access to the room is through a locked door or through a 10- by 10-foot garage-type door. A large exhaust hood was above the area, which contained one 55-gallon drum. A small exhaust hood was located above a laboratory bench that ran along the interior wall. The hoods vent air to the outside; no scrubbers or filters are present. No HNU readings above background were recorded. Contaminated mercury is also consolidated here for shipment to a mercury-recycling plant.[2,3]

Date of Start-Up

The solvent comping room has been in use since approximately October 1980.[3]

Date of Closure

The subject site is currently active.[2]

Wastes Managed

All solvent wastes are brought to the solvent comping room from the point of origin and consolidated in 55-gallon drums.[2,3] Waste codes associated with this unit include F001, F002, F003, F004, and F005.[2,3]

Release Controls

Solvents are consolidated into a 55-gallon drum that was covered at the time of the FIT 3 visit. The floor is cement, as are three of the walls. The drum receiving waste is segregated from the rest of the room by an enclosure that has a large ventilation hood.[2]

History of Releases

No record of release has been identified for this area. There was no evidence of spills at the time of the FIT 3 visit.[2,3]

4.1.2 SWMU No. 2
Drum Storage Area

The drum storage area is located behind the B wing, approximately midway between the solvent comping room and the heating and cooling plant. The 230- by 100-foot area is an open-air structure with a sloped roof. The western one-third of the area is used to store hazardous wastes. The remaining two-thirds of the area are used to store feedstock chemicals contained in 55-gallon drums. All drums in the storage area are staged on wooden pallets. There is a one-foot cement berm on three sides of the structure's perimeter. The cement pad floor slopes inwardly toward floor drains that are evenly spaced throughout the area. The drains empty into a small oil/water separator located approximately at the midpoint of the area; the separator is recessed into the floor and covered with a red steel lid.[2] According to Larry Taylor, manager of material management, the oil/water separator has never been utilized. However, leaves and other debris are cleaned from the unit as needed.[2,3]

Due to the volume of 55-gallon drums generated from feedstock chemicals, drums are rarely reused and are typically crushed and shipped to Chemical Waste Management, Incorporated, of Alabama, for incineration.[2,3]

Laboratory packs are also staged in this area before shipment to Thermal Chem in South Carolina for incineration. Workers were present, staging laboratory packs, on the day of the FIT 3 visit.[2,3]

Date of Start-Up

The drum storage area has been in use since approximately October 1980.[3]

Date of Closure

The subject area is currently active.[2]

Wastes Managed

All hazardous wastes generated in the facility are stored in the drum storage area before shipment off site. The wastes managed include constituents from the solvent comping room, the pilot plants, and laboratory packs. These wastes may be listed as having one of the following EPA RCRA waste identification numbers: U012 (aniline), U105 (2,4-dinitrotoluene), U107 (di-n-octyl phthalate), U122 (formaldehyde), U134 (hydrogen fluoride), U147 (maleic anhydride), U169 (nitrobenzene), U196 (pyridine), and U223 (toluene diisocyanate) and the following halogenated and nonhalogenated solvent wastes: F001 (spent halogenated solvents), F002 (spent halogenated solvents), F003 (spent nonhalogenated solvents), F004 (spent nonhalogenated solvents), and F005 (spent nonhalogenated solvents).[2,3,6] Generator quarterly waste reports have been included in appendix C.

Release Controls

All 55-gallon drums were covered and tagged at the time of the FIT 3 visit. Drums were stored on wooden pallets, and the cement floor was sloped inwardly to floor drains. A one-foot cement berm surrounded three sides of the floor perimeter to aid in the containment of spills. The cement floor measured approximately 230 by 100 foot, and the roof had an approximate 3-foot overhang.[2]

History of Releases

No releases from this area have been reported. There was no evidence of spills, and no HNU readings above background were recorded during the FIT 3 visit.[2,3]

4.1.3 SWMU No. 3
Pilot Plant Temporary Storage Area

The pilot plant temporary storage area is used to store containerized wastes from the large pilot plant operation prior to transfer of these wastes to the drum storage area. The waste materials are placed in 55-gallon drums and, once full, are transferred to the drum storage area.[2,3]

The pilot plant temporary storage area is located between the tank storage area and the large pilot plant. There were approximately twenty 55-gallon drums in this outside storage area at the time of the FIT 3 visit. There were two 55-gallon drums containing hazardous waste; the remainder contained feedstock chemicals. One drum was labeled "Hazardous Waste/Glass." The second drum was labeled "50 Percent Toluene, 50 Percent Styrene" and had a funnel screwed into the top bung. The funnel had a spring-activated top, which was closed.[2]

Date of Start-Up

The pilot plant storage area has been in operation since approximately October 1980.[3]

Date of Closure

The subject area is currently active.[2]

Wastes Managed

Wastes stored in this area are derived from the large pilot plant. At the time of the FIT 3 visit, two 55-gallon hazardous waste drums were present. One drum was labeled "Hazardous Waste/Glass." The second drum was labeled "50 Percent Toluene, 50 Percent Styrene."[2,3] The types of wastes managed vary with the type of operations being performed at the pilot plant.[3]

Release Controls

Wastes are containerized in 55-gallon steel drums that have lids. Secondary containment is limited to an asphalt-paved base.[2]

History of Releases

No releases from this area have been reported. No evidence of spills was observed, and no HNU readings above background were recorded at the time of the FIT 3 visit.[2,3]

4.1.4 SWMU No. 4
Non-Sanitary-Effluent-Handling System

The non-sanitary-effluent-handling system tanks are located behind the large pilot plant in the northeastern corner of the facility. The non-sanitary-effluent-handling system enables Arco to recycle relatively clean wastewater from laboratory sinks for noncontact process water applications. The laboratory sink water passes through an oil/water separator and is then temporarily stored in a 36,000-gallon equalization tank. The process water is drawn from the equalization tank and is used in cooling lines for instrumentation or as a sealant water for vacuum pumps. All process water is eventually pumped into a 142,300-gallon interim storage tank. The water in the interim storage tank is monitored for pH and is then released, after hours, into the DELCORA sewer system. In addition, an outside contractor samples the discharge water on a monthly basis, and the results are forwarded to DELCORA for permit compliance. According to Mr. Taylor, no treatment has ever been required for the process water.[2,3]

According to Mr. Taylor, approximately 40 percent of the laboratory sink drainwater is recycled from the non-sanitary-effluent-handling system, resulting in a savings of 50,000 gallons of water per day.[3]

Date of Start-Up

The non-sanitary-effluent-handling system has been in operation since approximately October 1980.[3]

Date of Closure

The non-sanitary-effluent-handling system is currently active.[2]

Wastes Managed

The non-sanitary-effluent-handling system discharges 80,000 to 100,000 gallons of water per day into the DELCORA sewer system. The water is monitored for pH, and an outside contractor regularly samples the water. No treatment has ever been required for this water.[2,3]

Release Controls

The 36,000-gallon equalization tank has an overflow relief system that empties into the 142,300-gallon interim storage tank. The steel tanks are surrounded by asphalt. No other secondary containment was observed.[2]

History of Releases

No releases from the non-sanitary-effluent-handling system have been reported. No evidence of spills was observed, and no HNU readings above background were recorded at the time of the FIT 3 visit.[2,3]

SECTION 5

5.0 FIELD TRIP REPORT

5.1 Summary

On Thursday, November 30, 1989, NUS FIT 3 members David Cooksley and Michael Snyder visited the Arco Chemical Company site in Newtown Square, Pennsylvania. Site access was granted by Larry Taylor, manager of materials management. In addition to Mr. Taylor, FIT 3 was accompanied on site by Donna Mondimore, supervisor of gas chromatography, William Richmond, supervisor of facility engineering and maintenance, and Kirk Stenz, senior chemical waste handler. Weather conditions at the time of the site visit were cloudy, with temperatures in the mid-30s. Larry Taylor requested that no photographs be taken due to the nature of the research and development business.

5.2 Persons Contacted

5.2.1 Prior to Field Trip

Larry Taylor
Manager, Materials Management
Arco Chemical Chemical Company
3801 West Chester Pike
Newtown Square, PA 19073
(215) 359-2437

Gary Bonner
PA DER
1875 New Hope Street
Norristown, PA 19401
(215) 270-1948

5.2.2 At the Site

Larry Taylor
Manager, Materials Management
William Richmond
Supervisor, Facility Engineering and Maintenance
Donna Mondimore
Supervisor, Gas Chromatography
Kirk Stenz
Senior Chemical Waste Handler
Arco Chemical Chemical Company
3801 West Chester Pike
Newtown Square, PA 19073
(215) 359-2437

5.2.3 Water Supply Well Information

No private wells were identified in the vicinity of the site, and no home well questionnaires were distributed. The nearest public groundwater well is located approximately 4.7 miles south of the site.

5.3 Site Observations

- The HNU background reading was 1.2 ppm; no readings above background were recorded on site.
- The mini-alert was set on the X1 position; no readings above background were recorded on site.
- Access was restricted to the site by a fence that surrounded the property and by a manned security post at the main entrance to the facility.
- Facility buildings have approximately 577,000 square feet of space.
- Two retention basins were observed on site.
- All laboratory wastes were tagged and stored in metal or plastic trays awaiting pickup.
- Small pilot plant wastes were tagged and containerized, awaiting pickup in bay areas behind the main buildings.
- One 55-gallon drum with a lid was observed in the solvent comping area.
- The hazardous waste drum storage area had concrete pads sloped inwardly toward drains. The drains were connected to an oil/water separator located beneath a red metal access door in the center of the drum storage area.
- The drum storage area had a one-foot concrete berm on three sides of the roofed storage area. All hazardous waste drums were tagged and labeled and placed on wooden pallets.
- Workers present in the drum storage area were staging laboratory packs.

- Two steel process water tanks were surrounded by an asphalt-paved area.

- Two 55-gallon drums, with lids, containing hazardous waste were observed on the asphalt-covered temporary storage area northwest of the large pilot plant.

F3-8910-26

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 1 - SITE INFORMATION AND ASSESSMENT

I. IDENTIFICATION
01 STATE: PA | 02 SITE NUMBER: 2600

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER				
Arco Chemical Company	3801 West Chester Pike				
03 CITY	04 STATE	05 ZIP CODE	06 COUNTY	07 COUNTY CODE	08 CONG DIST
Newtown Square	PA	19073	Delaware	045	07
09 COORDINATES LATITUDE	LONGITUDE				
39° 59' 25"	75° 24' 31"				

10 DIRECTIONS TO SITE (Starting from nearest public road)
At the intersection of Route 3 and Route 252, continue west on Route 3 to the west gate, the main entrance of Arco Chemical.

III. RESPONSIBLE PARTIES

01 OWNER (If known)	02 STREET (Business, mailing, residential)			
Arco Chemical Company	3801 West Chester Pike			
03 CITY	04 STATE	05 ZIP CODE	06 TELEPHONE NUMBER	
Newtown Square	PA	19073	(215)359-2437	
07 OPERATOR (If known and different from owner)	08 STREET (Business, mailing, residential)			
09 CITY	10 STATE	11 ZIP CODE	12 TELEPHONE NUMBER	
			( )	

13 TYPE OF OWNERSHIP (Check one)
☒ A. PRIVATE ☐ B. FEDERAL: _____ (Agency name) ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL
☐ F. OTHER: _____ (Specify) ☐ G. UNKNOWN

14 OWNER/OPERATOR NOTIFICATION ON FILE (Check all that apply)
☒ A. RCRA 3001 DATE RECEIVED: 11 14 80 (MONTH DAY YEAR) ☐ B. UNCONTROLLED WASTE SITE (CERCLA 103 c) DATE RECEIVED: _____ (MONTH DAY YEAR) ☐ C. NONE

IV. CHARACTERIZATION OF POTENTIAL HAZARD

01 ON SITE INSPECTION
☒ YES ☐ NO DATE 11 30 89 (MONTH DAY YEAR)
BY (Check all that apply)
☐ A. EPA ☒ B. EPA CONTRACTOR ☐ C. STATE ☐ D. OTHER CONTRACTOR
☐ E. LOCAL HEALTH OFFICIAL ☐ F. OTHER: _____ (Specify)
CONTRACTOR NAME(S): NUS Corporation

02 SITE STATUS (Check one)
☒ A. ACTIVE ☐ B. INACTIVE ☐ C. UNKNOWN

03 YEARS OF OPERATION
1978 (BEGINNING YEAR) | present (ENDING YEAR) ☐ UNKNOWN

04 DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT, KNOWN, OR ALLEGED
Substances stored on site include ignitable, corrosive, reactive, and toxic constituents.

05 DESCRIPTION OF POTENTIAL HAZARD TO ENVIRONMENT AND/OR POPULATION
None

V. PRIORITY ASSESSMENT

01 PRIORITY FOR INSPECTION (Check one. If high or medium is checked, complete Part 2 - Waste Information and Part 3 - Description of Hazardous Conditions and Incidents)
☐ A. HIGH (Inspection required promptly) ☐ B. MEDIUM (Inspection required) ☐ C. LOW (Inspect on time available basis) ☒ D. NONE (No further action needed, complete current disposition only)

VI. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)		03 TELEPHONE NUMBER	
Anthony Dappolone	U.S. Environmental Protection Agency		(215) 597-3153	
04 PERSON RESPONSIBLE FOR ASSESSMENT	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NUMBER	08 DATE
David A. Cooksley	NUS Corp.	FIT 3	(215)687-9510	12 29 89

EPA FORM 2070-12 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
PA	2600

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

- [X] A SOLID
- [ ] B POWDER, FINES
- [ ] C SLUDGE
- [ ] D OTHER (Specify)
- [ ] E SLURRY
- [X] F LIQUID
- [ ] G GAS

02 WASTE QUANTITY AT SITE (Measures of waste quantities must be independent)

TONS 86/quarter

CUBIC YARDS

NO OF DRUMS

03 WASTE CHARACTERISTICS (Check all that apply)

- [X] A TOXIC
- [X] B CORROSIVE
- [ ] C RADIOACTIVE
- [ ] D PERSISTENT
- [ ] E SOLUBLE
- [ ] F INFECTIOUS
- [ ] G FLAMMABLE
- [X] H IGNITABLE
- [ ] I HIGHLY VOLATILE
- [ ] J EXPLOSIVE
- [X] K REACTIVE
- [ ] L INCOMPATIBLE
- [ ] M NOT APPLICABLE

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			
OLW	OILY WASTE			
SOL	SOLVENTS	unknown		approximately 10,000 gallons per
PSD	PESTICIDES			quarter are generated.
OCC	OTHER ORGANIC CHEMICALS	unknown		constituents are widely variable in
IOC	INORGANIC CHEMICALS			type and quantity.
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS			

IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently cited CAS Numbers)

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
SOL	nitrobenzene	98-95-3	drum	unknown	
OCC	maleic anhydride	108-31-6	drum/lab pack	unknown	
SOL	aniline	62-53-3	drum	unknown	
OCC	toluene diisocyanate	584-84-9	drum/lab pack	unknown	
OCC	formaldehyde	50-00-0	drum	unknown	
			*Note: waste types and quantities vary de-		
			pending on pilot plant operations. The		
			above list is typical of wastes found on		
			site but may not characterize all wastes		
			on site.		

V. FEEDSTOCKS (See Appendix for CAS Numbers) See Above

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Arco Chemical. Notification of Hazardous Waste Activity. January 30, 1986. NUS FIT 3. Preliminary assessment; site visit. November 30, 1989.

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
PA	2600

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☐ A. GROUNDWATER CONTAMINATION
02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____
04 NARRATIVE DESCRIPTION

None reported or observed.

01 ☐ B. SURFACE WATER CONTAMINATION
02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____
04 NARRATIVE DESCRIPTION

None reported or observed.

01 ☐ C. CONTAMINATION OF AIR
02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____
04 NARRATIVE DESCRIPTION

None reported or observed.

01 ☐ D. FIRE/EXPLOSIVE CONDITIONS
02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____
04 NARRATIVE DESCRIPTION

None reported or observed.

01 ☐ E. DIRECT CONTACT
02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____
04 NARRATIVE DESCRIPTION

None reported or observed.

01 ☐ F. CONTAMINATION OF SOIL
02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
03 AREA POTENTIALLY AFFECTED: _____ (Acres)
04 NARRATIVE DESCRIPTION

None reported or observed.

01 ☐ G. DRINKING WATER CONTAMINATION
02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____
04 NARRATIVE DESCRIPTION

None reported or observed.

01 ☐ H. WORKER EXPOSURE/INJURY
02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
03 WORKERS POTENTIALLY AFFECTED: _____
04 NARRATIVE DESCRIPTION

None reported or observed.

01 ☐ I. POPULATION EXPOSURE/INJURY
02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____
04 NARRATIVE DESCRIPTION

None reported or observed.

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
PA	2600

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ☐ J. DAMAGE TO FLORA — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

None reported or observed.

01 ☐ K. DAMAGE TO FAUNA — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION (Include name(s) of species)

None reported or observed.

01 ☐ L. CONTAMINATION OF FOOD CHAIN — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

None reported or observed.

01 ☐ M. UNSTABLE CONTAINMENT OF WASTES (Spills, runoff, standing liquids, leaking drums) — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

None reported or observed.

01 ☐ N. DAMAGE TO OFFSITE PROPERTY — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

None reported or observed.

01 ☐ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

None reported or observed.

01 ☐ P. ILLEGAL, UNAUTHORIZED DUMPING — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

None reported or observed.

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

None reported or observed.

III. TOTAL POPULATION POTENTIALLY AFFECTED: 0

IV. COMMENTS

None

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

NUS FIT 3. Preliminary assessment; site visit. November 30, 1989.

SECTION 6

6.0 REFERENCES FOR SECTIONS 1.0 THROUGH 5.0

1. United States Geological Survey. Antrim, Pennsylvania Quadrangle, 7.5 Minute Series. Topographic Map. 1946, photorevised 1986. Combined with Keeneyville, Pennsylvania Quadrangle, 7.5 Minute Series. Topographic Map. 1954, photorevised 1969; Crooked Creek, Pennsylvania Quadrangle, 7.5 Minute Series. Topographic Map. 1954, photorevised 1986; and Cherry Flats, Pennsylvania Quadrangle, 7.5 Minute Series. Topographic Map. 1970.

2. NUS Corporation, FIT 3. Preliminary assessment; site visit. TDD No. F3-8910-26, November 30, 1989.

3. Taylor, Larry, Manager of Material Management, Arco Chemical, with Michael Snyder, NUS FIT 3. Meeting. November 30, 1989.

4. Arco Chemical Company. Notification of Hazardous Waste Activity. July 25, 1980.

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6. Arco Chemical Company. Notification of Hazardous Waste Activity (revised). January 30, 1986.

7. Bulkin, Shirley D., United States Environmental Protection Agency, to J.E. Connor, Arco Chemical Company. Correspondence. July 17, 1981.

8. Bulkin, Shirley D., United States Environmental Protection Agency, to J.E. Connor, Arco Chemical Company. Correspondence. December 30, 1981.

9. Lynn, Wayne L., Pennsylvania Department of Environmental Resources, to Francis Greek, Arco Chemical Company. Correspondence. February 16, 1983.

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12. Philadelphia Suburban Water Company. Water - Our Most Precious Resource. April 1987.

13. Chester County Planning Commission. Community Facilities Volume 2 - Water Facilities, Chester County, Pennsylvania. December 1985.

14. Laughran, Jim, Manager, Media Water Company, with Martin Howe, NUS FIT 3. Telecon. August 30, 1985.

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16. Berg, Thomas M., and Christine M. Dodge, Pennsylvania Department of Environmental Resources, Bureau of Topographic and Geologic Survey. Atlas of Preliminary Geologic Quadrangle Maps of Pennsylvania. Map 61, 1981.

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18. Laughran, Jim, Manager, Media Water Company, with Audrey Harrington, NUS FIT 3. Telecon. January 15, 1986.

19. United States Department of the Interior. Media, Pennsylvania Quadrangle, 7.5 Minute Series. National Wetlands Inventory. 1981.

20. Pennsylvania Department of Environmental Resources. Title 25, Rules and Regulations. Part I, Department of Environmental Resources. Subpart C, Protection of Natural Resources. Article II, Water Resources. Chapter 93, Water Quality Standards, p. 93.28.

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23. Poth, Charles W., Pennsylvania Department of Environmental Resources, Bureau of Topographic and Geologic Survey. Summary Ground-Water Resources of Lancaster County, Pennsylvania. Water Resource Report 43, 1977.

24. Geyer, Alan R., and J. Peter Wilshusen, Pennsylvania Department of Environmental Resources, Bureau of Topographic and Geologic Survey. Engineering Characteristics of the Rocks of Pennsylvania. Environmental Geology Report 1, 1982.

25. Hall, G.M., Pennsylvania Department of Environmental Resources, Bureau of Topographic and Geologic Survey. Groundwater of Southeastern Pennsylvania. Water Resource Report 2, 1934, reprinted 1973.

26. United States Department of Agriculture, Soil Conservation Service. Soil Survey of Chester and Delaware Counties, Pennsylvania. 1963.

27. National Oceanic and Atmospheric Administration. Climatography of the United States. No. 20, Climate of Pennsylvania. June 1982.

28. United States Department of Commerce. Climatic Atlas of the United States. Normal Annual Total Precipitation. National Climatic Center, Asheville, North Carolina. 1979.

29. United States Department of Commerce. Climatic Atlas of the United States. Mean Annual Lake Evaporation. National Climatic Center, Asheville, North Carolina. 1979.

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32. Kulp, Charles, United States Department of the Interior, Fish and Wildlife Service, to Garth Glenn, NUS FIT 3. Correspondence. December 13, 1989.

33. Drayton, Eugenie, Pennsylvania Natural Diversity Inventory, to Garth Glenn, NUS FIT 3. Correspondence. December 17, 1989.

APPENDIX A

lease print or type with ELITE type *(12 characters/inch)* in the unshaded areas only.

GSA No. 0246-EPA-OT

EPA — U.S. ENVIRON[MEN]TAL PROTECTION AGENCY

NOTIFICATION OF [H]AZARDOUS WASTE ACTIVITY

INSTALLATION'S EPA I.D. NO.

NAME OF INSTALLATION

INSTALLATION MAILING ADDRESS

LOCATION OF INSTALLATION

PLEASE PLACE LABEL IN THIS SPACE

INS[TRU]CTIONS: If you received a preprinted label, affix it in the space at left. If any of the information on the label is incorrect, draw a line through it and supply the correct information in the appropriate section below. If the label is complete and correct, leave Items I, II, and III below blank. If you did not receive a preprinted label, complete all items. "Installation" means a single site where hazardous waste is generated, treated, stored and/or disposed of, or a transporter's principal place of business. Please refer to the INSTRUCTIONS FOR FILING NOTIFICATION before completing this form. The information requested herein is required by law *(Section 3010 of the Resource Conservation and Recovery Act)*.

[FO]R OFFICIAL USE ONLY

COMMENTS

INSTALLATION'S EPA I.D. NUMBER	T/A	C	APPROVED	DATE RECEIVED (yr., mo., & day)
PAD006077102	1			800801

Aug 1 80 000007

[I. NAME] OF INSTALLATION

[A]RCO CHEMICAL CO RESEARCH & ENG CTR

[II.] INSTALLATION MAILING ADDRESS

STREET OR P.O. BOX

3801 WEST CHESTER PIKE

CITY OR TOWN	ST.	ZIP CODE
NEWTOWN SQUARE	PA	19073

[III.] LOCATION OF INSTALLATION

STREET OR ROUTE NUMBER

SAME

CITY OR TOWN	ST.	ZIP CODE

[IV. IN]STALLATION CONTACT

NAME AND TITLE *(last, first, & job title)*	PHONE NO. *(area code & no.)*
REID, JOHN C MGR, ADM SVCS	215-353-4237

[V]. OWNERSHIP

A. NAME OF INSTALLATION'S LEGAL OWNER

ARCO CHEM CO., DIV ATLANTIC RICHFIELD CO

B. TYPE OF OWNERSHIP *([e]nter the appropriate letter into box)*

[F] = FEDERAL
M = NON–FEDERAL

M

VI. TYPE OF HAZARDOUS WASTE ACTIVITY *(enter "X" in the appropriate box(es))*

- [X] A. GENERATION
- [ ] B. TRANSPORTATION *(complete item VII)*
- [X] C. TREAT/STORE/DISPOSE
- [ ] D. UNDERGROUND INJECTION

[VII]. MODE OF TRANSPORTATION *(transporters only — enter "X" in the appropriate box(es))*

- [ ] A. AIR
- [ ] B. RAIL
- [X] C. HIGHWAY
- [ ] D. WATER
- [ ] E. OTHER *(specify)*:

[VII]I. FIRST OR SUBSEQUENT NOTIFICATION

[Mar]k "X" in the appropriate box to indicate whether this is your installation's first notification of hazardous waste activity or a subsequent notification. [If th]is is not your first notification, enter your Installation's EPA I.D. Number in the space provided below.

- [X] A. FIRST NOTIFICATION
- [ ] B. SUBSEQUENT NOTIFICATION *(complete item C)*

C. INSTALLATION'S EPA I.D. NO.

[I]X. DESCRIPTION OF HAZARDOUS WASTES

[Plea]se go to the reverse of this form and provide the requested information.

[EP]A Form 8700-12 (6-80)

CONTINUE ON REVERSE

D. – FOR OFFICIAL USE ONLY

W	P	A	T	0	0	0	6	0	7	7	7	0	2	1

IX. DESCRIPTION OF HAZARDOUS WASTES *(continued from front)*

A. HAZARDOUS WASTES FROM NON–SPECIFIC SOURCES. Enter the four–digit number from 40 CFR Part 261.31 for each listed hazardous waste from non–specific sources your installation handles. Use additional sheets if necessary.

1	2	3	4	5	6
F004	F005				
7	**8**	**9**	**10**	**11**	**12**

B. HAZARDOUS WASTES FROM SPECIFIC SOURCES. Enter the four–digit number from 40 CFR Part 261.32 for each listed hazardous waste from specific industrial sources your installation handles. Use additional sheets if necessary.

13	14	15	16	17	18
19	**20**	**21**	**22**	**23**	**24**
25	**26**	**27**	**28**	**29**	**30**

C. COMMERCIAL CHEMICAL PRODUCT HAZARDOUS WASTES. Enter the four–digit number from 40 CFR Part 261.33 for each chemical substance your installation handles which may be a hazardous waste. Use additional sheets if necessary.

31	32	33	34	35	36
37	**38**	**39**	**40**	**41**	**42**
43	**44**	**45**	**46**	**47**	**48**

D. LISTED INFECTIOUS WASTES. Enter the four–digit number from 40 CFR Part 261.34 for each listed hazardous waste from hospitals, veterinary hospitals, medical and research laboratories your installation handles. Use additional sheets if necessary.

49	50	51	52	53	54

E. CHARACTERISTICS OF NON–LISTED HAZARDOUS WASTES. Mark "X" in the boxes corresponding to the characteristics of non–listed hazardous wastes your installation handles. *(See 40 CFR Parts 261.21 – 261.24.)*

- [X] 1. IGNITABLE (D001) (See Note Below)
- [X] 2. CORROSIVE (D002)
- [X] 3. REACTIVE (D003)
- [X] 4. TOXIC (D000)

X. CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

SIGNATURE	NAME & OFFICIAL TITLE *(type or print)*	DATE SIGNED
John C. Reid	John C. Reid Manager Administrative Services	7-25-80

EPA Form 8700-12 (6-80) REVERSE

NOTE: This is a laboratory operation and may occasionally discard small quantities of commercial chemicals listed in Section 261.33.

EPA

ACKNOWLEDGEMENT OF NOTIFICATION OF HAZARDOUS WASTE ACTIVITY
(VERIFICATION)

This is to acknowledge that you have filed a Notification of Hazardous Waste Activity for the installation located at the address shown in the box below to comply with Section 3010 of the Resource Conservation and Recovery Act *(RCRA)*. Your EPA Identification Number for that installation appears in the box below. The EPA Identification Number must be included on all shipping manifests for transporting hazardous wastes; on all Annual Reports that generators of hazardous waste, and owners and operators of hazardous waste treatment, storage and disposal facilities must file with EPA; on all applications for a Federal Hazardous Waste Permit; and other hazardous waste management reports and documents required under Subtitle C of RCRA.

EPA I.D. NUMBER ➤ PAT 00 060 7770

Mr. Francis Greck
Arco Chemical Co Research & Eng. Ctr.
3801 West Chester Pike
Newtown Square, PA 19073

INSTALLATION ADDRESS ➤ 3801 West Chester Pike
Newtown Square, PA 19073

EPA Form 8700-12B (4-80)

Please print or type in the unshaded areas only (fill-in areas are spaced for elite type, i.e., 12 characters/inch).

Form Approved OMB No. 158-R0175

FORM 1 GENERAL — EPA

U.S. ENVIRONMENTAL PROTECTION AGENCY

GENERAL INFORMATION

Consolidated Permits Program

(Read the "General Instructions" before starting.)

I. EPA I.D. NUMBER

F PAD046538211 D

LABEL ITEMS

I. EPA I.D. NUMBER

III. FACILITY NAME

V. FACILITY MAILING ADDRESS

VI. FACILITY LOCATION

PLEASE PLACE LABEL IN THIS SPACE

PAD 04 653 8211
Arco Chemical Co. Research & Eng. Ctr.

GENERAL INSTRUCTIONS

If a preprinted label has been provided, affix it in the designated space. [illegible]

II. POLLUTANT CHARACTERISTICS

INSTRUCTIONS: [illegible]

SPECIFIC QUESTIONS	YES	NO	FORM ATTACHED	SPECIFIC QUESTIONS	YES	NO	FORM ATTACHED
A. [illegible] (FORM 2A)		X		B. [illegible] discharge to waters of the U.S.? (FORM 2B)		X	
C. Is this a facility which currently results in discharges to waters of the U.S. other than those described in A or B above? (FORM 2C)		X		D. Is this a proposed facility (other than those described in A or B above) which will result in a discharge to waters of the U.S.? (FORM 2D)		X	
E. Does or will this facility treat, store, or dispose of hazardous wastes? (FORM 3)	X		X	F. Do you or will you inject at this facility industrial or municipal effluent below the lowermost stratum containing, within one quarter mile of the well bore, underground sources of drinking water? (FORM 4)		X	
G. Do you or will you inject at this facility any produced water or other fluids which are brought to the surface in connection with conventional oil or natural gas production, inject fluids used for enhanced recovery of oil or natural gas, or inject fluids for storage of liquid hydrocarbons? (FORM 4)		X		H. Do you or will you inject at this facility fluids for special processes such as mining of sulfur by the Frasch process, solution mining of minerals, in situ combustion of fossil fuel, or recovery of geothermal energy? (FORM 4)		X	
I. Is this facility a proposed stationary source which is one of the 28 industrial categories listed in the instructions and which will potentially emit 100 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)		X		J. Is this facility a proposed stationary source which is NOT one of the 28 industrial categories listed in the instructions and which will potentially emit 250 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)		X	

III. NAME OF FACILITY

1 ARCO CHEMICAL CO RESEARCH & ENG CTR

IV. FACILITY CONTACT

A. NAME & TITLE (last, first, & title)	B. PHONE (area code & no.)
2 GREEK, FRANCIS SUPVR ADM SERV	215 586 4700

V. FACILITY MAILING ADDRESS

A. STREET OR P.O. BOX

3 3801 WEST CHESTER PIKE

B. CITY OR TOWN	C. STATE	D. ZIP CODE
4 NEWTOWN SQUARE	PA	19073

VI. FACILITY LOCATION

A. STREET, ROUTE NO. OR OTHER SPECIFIC IDENTIFIER

5 3801 WEST CHESTER PIKE

B. COUNTY NAME

DELAWARE

C. CITY OR TOWN	D. STATE	E. ZIP CODE	F. COUNTY CODE (if known)
6 NEWTOWN SQUARE	PA	19073	

CONTINUED FROM THE FRONT

SIC code	(specify)	SIC code	(specify)
2860	ORGANIC CHEMICALS	2869	INDUSTRIAL ORGANIC CHEMICALS (NOS)
2821	PLASTICS AND SYNTHETICS		

VIII. OPERATOR INFORMATION

ARCO CHEMICAL CO DIV ATL RICHFIELD CO X

P (specify) 215 359 2000

3801 WEST CHESTER PIKE

NEWTOWN SQUARE PA 19073

X. EXISTING ENVIRONMENTAL PERMITS

SEE ATTACHED (specify) PERMITS LISTING

XI. MAP

XII. NATURE OF BUSINESS (provide a brief description)

Research and Engineering facility. Pilot plants and laboratory facilities are the source of chemical wastes.

No commercial chemical manufacturing facilities are located at this site.

XIII. CERTIFICATION (see instructions)

A. NAME & OFFICIAL TITLE (type or print)	B. SIGNATURE	C. DATE SIGNED
J. E. Connor, Jr., Vice President Research & Development	[signature]	11/14/80

COMMENTS FOR OFFICIAL USE ONLY

RESPONSE TO QUESTION X

EXISTING ENVIRONMENTAL PERMITS

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES

Bureau of Air Quality and Noise Control

Permits issued in accordance with the Pennsylvania Air Pollution Control Act and with Chapter 127 of the rules and regulations of the Department of Environmental Resources:

PLAN APPROVAL NO.	SOURCE
23-302-076	Watertube Boiler No. 1
23-302-078	Watertube Boiler No. 2
23-302-079	Watertube Boiler No. 3
23-301-086	Solid Waste Incinerator

Division of Solid Waste Management

Permit issued in accordance with Section 7 of Pennsylvania Solid Waste Management Act:

PERMIT NO.	FACILITY
400401	Solid Waste Incinerator

Bureau of Water Quality Management

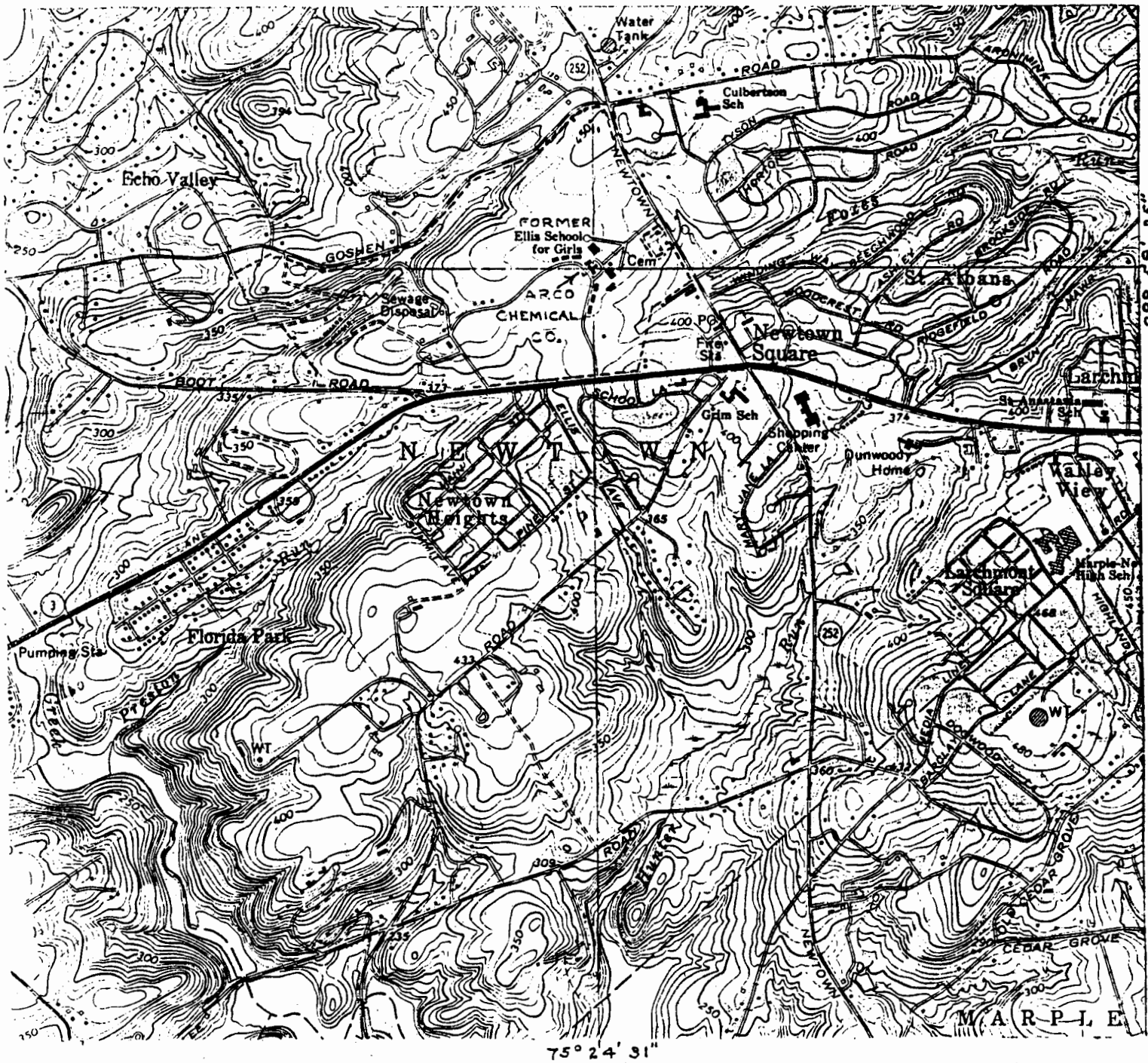
Permit issued in accordance with Pennsylvania Clean Streams Law and Water Obstruction Act:

PERMIT NO.	TYPE
2378801	Erosion and Sedimentation Control Permit

DELAWARE COUNTY REGIONAL WATER QUALITY CONTROL AUTHORITY

Wastewater discharge permit:

PERMIT NO.	TYPE
47-1	Discharge to POTW



75° 24' 31"

SCALE 1:24000

1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 KILOMETER

CONTOUR INTERVAL 10 FEET
DATUM IS MEAN SEA LEVEL

MEDIA QUADRANGLE
PENNSYLVANIA
7.5 MINUTE SERIES (TOPOGRAPHIC)
NW/4 CHESTER 15' QUADRANGLE

Mapped, edited, and published by the Geological Survey

MN GN
9½° 169 MILS
0°17' 5 MILS

UTM GRID AND 1966 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

LOCATION MAP

ARCO Chemical Company
Division of Atlantic Richfield Company
RESEARCH & ENGINEERING
3801 WEST CHESTER PK., NEWTOWN SQ., PA. 19073

Please print or type in the unshaded areas only
(fill-in areas are spaced for elite type, i.e., 12 characters/inch).

Form Approved OMB No. 158-S80004

FORM 3 RCRA

U.S. ENVIRONMENTAL PROTECTION AGENCY

HAZARDOUS WASTE PERMIT APPLICATION

Consolidated Permits Program

(This information is required under Section 3005 of RCRA.)

I. EPA I.D. NUMBER: F P A T 0 0 0 6 0 7 7 7 0 | T/A: 1

FOR OFFICIAL USE ONLY

APPLICATION APPROVED	DATE RECEIVED (yr., mo., & day)	COMMENTS

II. FIRST OR REVISED APPLICATION

Place an "X" in the appropriate box in A or B below *(mark one box only)* to indicate whether this is the first application you are submitting for your facility or a revised application. If this is your first application and you already know your facility's EPA I.D. Number, or if this is a revised application, enter your facility's EPA I.D. Number in Item I above.

A. FIRST APPLICATION *(place an "X" below and provide the appropriate date)*

[X] 1. EXISTING FACILITY *(See instructions for definition of "existing" facility. Complete item below.)*

FOR EXISTING FACILITIES, PROVIDE THE DATE *(yr., mo., & day)* OPERATION BEGAN OR THE DATE CONSTRUCTION COMMENCED *(use the boxes to the left)*

YR.	MO.	DAY
7 8	1 0	1 0

[ ] 2. NEW FACILITY *(Complete item below.)*

FOR NEW FACILITIES, PROVIDE THE DATE *(yr., mo., & day)* OPERATION BEGAN OR IS EXPECTED TO BEGIN

YR.	MO.	DAY

B. REVISED APPLICATION *(place an "X" below and complete Item I above)*

[ ] 1. FACILITY HAS INTERIM STATUS

[ ] 2. FACILITY HAS A RCRA PERMIT

III. PROCESSES – CODES AND DESIGN CAPACITIES

A. **PROCESS CODE** – Enter the code from the list of process codes below that best describes each process to be used at the facility. Ten lines are provided for entering codes. If more lines are needed, enter the code(s) in the space provided. If a process will be used that is not included in the list of codes below, then describe the process *(including its design capacity)* in the space provided on the form *(Item III-C)*.

B. **PROCESS DESIGN CAPACITY** – For each code entered in column A enter the capacity of the process.

1. AMOUNT – Enter the amount.

2. UNIT OF MEASURE – For each amount entered in column B(1), enter the code from the list of unit measure codes below that describes the unit of measure used. Only the units of measure that are listed below should be used.

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Storage:		
CONTAINER *(barrel, drum, etc.)*	S01	GALLONS OR LITERS
TANK	S02	GALLONS OR LITERS
WASTE PILE	S03	CUBIC YARDS OR CUBIC METERS
SURFACE IMPOUNDMENT	S04	GALLONS OR LITERS
Disposal:		
INJECTION WELL	D79	GALLONS OR LITERS
LANDFILL	D80	ACRE-FEET *(the volume that would cover one acre to a depth of one foot)* OR HECTARE-METER
LAND APPLICATION	D81	ACRES OR HECTARES
OCEAN DISPOSAL	D82	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	D83	GALLONS OR LITERS
Treatment:		
TANK	T01	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	T02	GALLONS PER DAY OR LITERS PER DAY
INCINERATOR	T03	TONS PER HOUR OR METRIC TONS PER HOUR; GALLONS PER HOUR OR LITERS PER HOUR
OTHER *(Use for physical, chemical, thermal or biological treatment processes not occurring in tanks, surface impoundments or incinerators. Describe the processes in the space provided; Item III-C.)*	T04	GALLONS PER DAY OR LITERS PER DAY

UNIT OF MEASURE	UNIT OF MEASURE CODE
GALLONS	G
LITERS	L
CUBIC YARDS	Y
CUBIC METERS	C
GALLONS PER DAY	U
LITERS PER DAY	V
TONS PER HOUR	D
METRIC TONS PER HOUR	W
GALLONS PER HOUR	E
LITERS PER HOUR	H
ACRE-FEET	A
HECTARE-METER	F
ACRES	B
HECTARES	Q

EXAMPLE FOR COMPLETING ITEM III *(shown in line numbers X-1 and X-2 below)*: A facility has two storage tanks, one tank can hold 200 gallons and the other can hold 400 gallons. The facility also has an incinerator that can burn up to 20 gallons per hour.

DUP | T/A: | C: 1

LINE NUMBER	A. PROCESS CODE (from list above)	B. PROCESS DESIGN CAPACITY 1. AMOUNT (specify)	B. PROCESS DESIGN CAPACITY 2. UNIT OF MEASURE (enter code)	FOR OFFICIAL USE ONLY	LINE NUMBER	A. PROCESS CODE (from list above)	B. PROCESS DESIGN CAPACITY 1. AMOUNT	B. PROCESS DESIGN CAPACITY 2. UNIT OF MEASURE (enter code)	FOR OFFICIAL USE ONLY
X-1	S 0 2	600	G		5				
X-2	T 0 3	20	E		6				
1	S 0 1	100,000	G		7				
2	S 0 2	6,500	G		8				
3	T 0 3	20	E		9				
4					10				

Continued from the front.

. PROCESSES *(continued)*

SPACE FOR ADDITIONAL PROCESS CODES OR FOR DESCRIBING OTHER PROCESSES *(code "T04")*. FOR EACH PROCESS ENTERED HERE INCLUDE DESIGN CAPACITY.

NONE

SCRIPTION OF HAZARDOUS WASTES

A. **EPA HAZARDOUS WASTE NUMBER** – Enter the four–digit number from 40 CFR, Subpart D for each listed hazardous waste you will handle. If y handle hazardous wastes which are not listed in 40 CFR, Subpart D, enter the four–digit number*(s)* from 40 CFR, Subpart C that describes the charact tics and/or the toxic contaminants of those hazardous wastes.

B. **ESTIMATED ANNUAL QUANTITY** – For each **listed waste** entered in column A estimate the quantity of that waste that will be handled on an annual basis. For each **characteristic** or **toxic contaminant** entered in column A estimate the total annual quantity of all the non–listed waste*(s)* that will be handled which possess that characteristic or contaminant.

C. **UNIT OF MEASURE** – For each quantity entered in column B enter the unit of measure code. Units of measure which must be used and the appropriate codes are:

ENGLISH UNIT OF MEASURE	CODE	METRIC UNIT OF MEASURE	CODE
POUNDS	P	KILOGRAMS	K
TONS	T	METRIC TONS	M

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure taking into account the appropriate density or specific gravity of the waste.

D. **PROCESSES**

1. PROCESS CODES:
   For listed hazardous waste: For each **listed** hazardous waste entered in column A select the code*(s)* from the list of process codes contained in Item III to indicate how the waste will be stored, treated, and/or disposed of at the facility.
   For non–listed hazardous wastes: For each characteristic or toxic contaminant entered in column A, select the code*(s)* from the list of process codes ontained in Item III to indicate **all** the processes that will be used to store, treat, and/or dispose of all the non–listed hazardous wastes that possess at characteristic or toxic contaminant.
   Note: Four spaces are provided for entering process codes. If more are needed: (1) Enter the first three as described above; (2) Enter "000" in t extreme right box of Item IV-D(1); and (3) Enter in the space provided on page 4, the line number and the additional code*(s)*.

2. PROCESS DESCRIPTION: If a code is not listed for a process that will be used, describe the process in the space provided on the form.

NOTE: HAZARDOUS WASTES DESCRIBED BY MORE THAN ONE EPA HAZARDOUS WASTE NUMBER – Hazardous wastes that can be described by more than one EPA Hazardous Waste Number shall be described on the form as follows:

1. Select one of the EPA Hazardous Waste Numbers and enter it in column A. On the same line complete columns B,C, and D by estimating the total annual quantity of the waste end describing all the processes to be used to treat, store, and/or dispose of the waste.
2. In column A of the next line enter the other EPA Hazardous Waste Number that can be used to describe the waste. In column D(2) on that line enter "included with above" and make no other entries on that line.
3. Repeat step 2 for each other EPA Hazardous Waste Number that can be used to describe the hazardous waste.

EXAMPLE FOR COMPLETING ITEM IV *(shown in line numbers X-1, X-2, X-3, and X-4 below)* – A facility will treat and dispose of an estimated 900 pounds per year of chrome shavings from leather tanning and finishing operation. In addition, the facility will treat and dispose of three non–listed wastes. Two wastes are corrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimated 100 pounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

NO.	A. EPA HAZARD. WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES 1. PROCESS CODES (enter)	D. PROCESSES 2. PROCESS DESCRIPTION (if a code is not entered in D(1))
X-1	K 0 5 4	900	P	T 0 3 D 8 0	
X-2	D 0 0 2	400	P	T 0 3 D 8 0	
X-3	D 0 0 1	100	P	T 0 3 D 8 0	
X-4	D 0 0 2				included with above

Continued from page 2.

NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

Form Approved OMB No. 158-S80004

EPA I.D. NUMBER (enter from page 1): WP PAD-04-653-8211 C 1

FOR OFFICIAL USE ONLY: W DUP T/A C 2 DUP

V. DESCRIPTION OF HAZARDOUS WASTES (continued)

LINE NO.	A. EPA HAZARD. WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES 1. PROCESS CODES (enter)	D. PROCESSES 2. PROCESS DESCRIPTION (if a code is not entered in D(1))
1					
2	F003	60	T	S01	
3	F005				Included with above
4	D002	223	T	S01	
5	D010				Included with above
6	D001	70	T	S01	
	D002				Included with above
	D003				Included with above
9	D010				Included with above
10	D001	164	T	S02T03*	
11	D001	120	T	S01T03*	
12	D002	20	T	S01	
13	F004	133	T	S01T03*	
14	D010				Included with above
15					
16					
17					
18					
19					
20					*see additional information -
21					Attachment I
22					
23					
24					
25					
26					

PA Form 3510-3 (6-80)

CONTINUE ON REVERSE

Continued from the front.

V. DESCRIPTION OF HAZARDOUS WAS[illegible] 5 (continued)

E. USE THIS SPACE TO LIST ADDITIONAL PROCESS CODES FROM ITEM D(1) ON PAGE 3.

NOT APPLICABLE

EPA I.D. NO. (enter from page 1)

PAD-04-653-8211

VI. FACILITY DRAWING

All existing facilities must include in the space provided on page 5 a scale drawing of the facility *(see instructions for more detail).*

VII. PHOTOGRAPHS

All existing facilities must include photographs *(aerial or ground—level)* that clearly delineate all existing structures; existing storage, treatment and disposal areas; and sites of future storage, treatment or disposal areas *(see instructions for more detail).*

VIII. FACILITY GEOGRAPHIC LOCATION

LATITUDE (degrees, minutes, & seconds)	LONGITUDE (degrees, minutes, & seconds)
39 59 25	075 24 31

IX. FACILITY OWNER

[X] A. If the facility owner is also the facility operator as listed in Section VIII on Form 1, "General Information", place an "X" in the box to the left and skip to Section IX below.

If the facility owner is not the facility operator as listed in Section VIII on Form 1, complete the following items:

1. NAME OF FACILITY'S LEGAL OWNER	2. PHONE NO. (area code &

3. STREET OR P.O. BOX	4. CITY OR TOWN	5. ST.	6. ZIP CODE
	C G		

X. OWNER CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

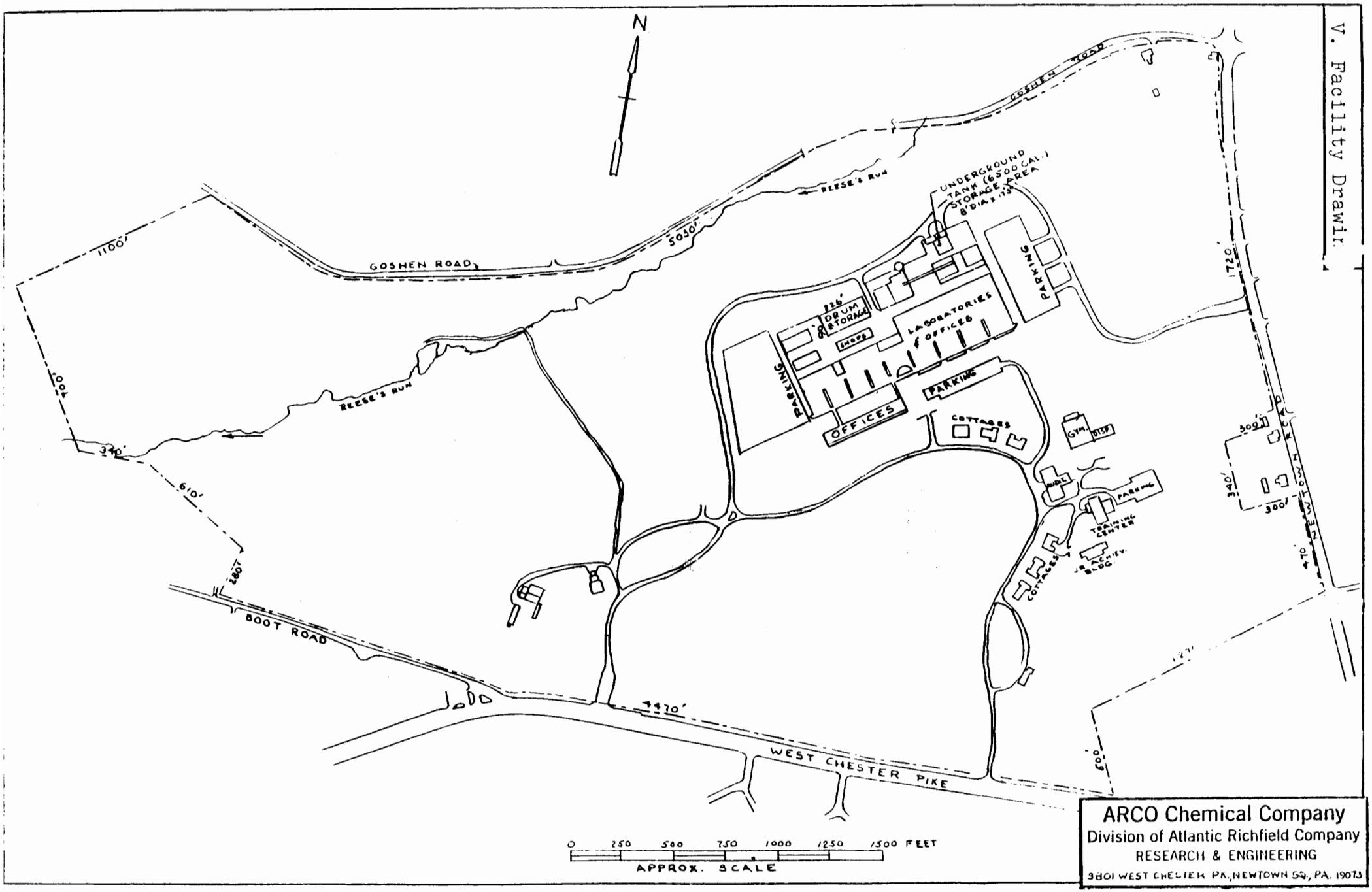
A. NAME (print or type)	B. SIGNATURE	C. DATE SIGNED
J. E. Connor, Jr., Vice President Research & Development	J E Connor	11/14/80

XI. OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME (print or type)	B. SIGNATURE	C. DATE SIGNED

V. Facility Drawing



ARCO Chemical Company
Division of Atlantic Richfield Company
RESEARCH & ENGINEERING
3801 WEST CHESTER PK., NEWTOWN SQ., PA. 19073

Attachment I

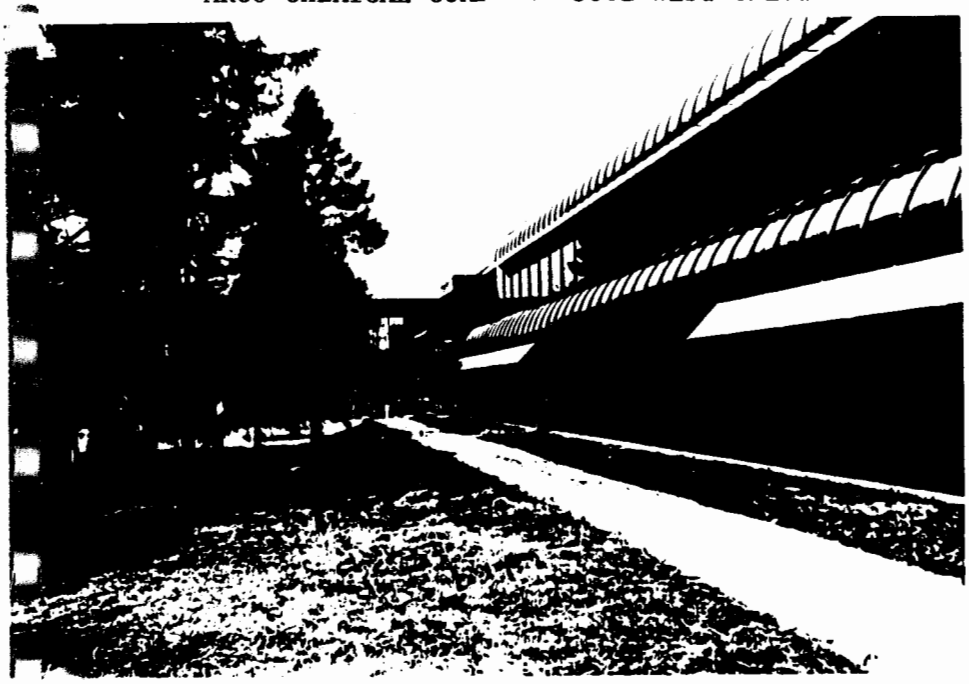
ARCO Chemical Company
Research & Engineering Center
Newtown Square, PA 19073

EPA I. D. Number: PAT 000607770

Supplementary Information
Form 3, Item 4

Permits for a solid waste incinerator have been obtained from the Pennsylvania Department of Environmental Resources. This system, currently being designed, will utilize flammable solvents from pilot plant operations as supplementary fuel. Until this unit is in operation, these waste streams will be disposed of at off-site facilities.

ARCO CHEMICAL COMP Y--3801 WEST CHESTER PIKE--NEWT N SQUARE, PA 19073

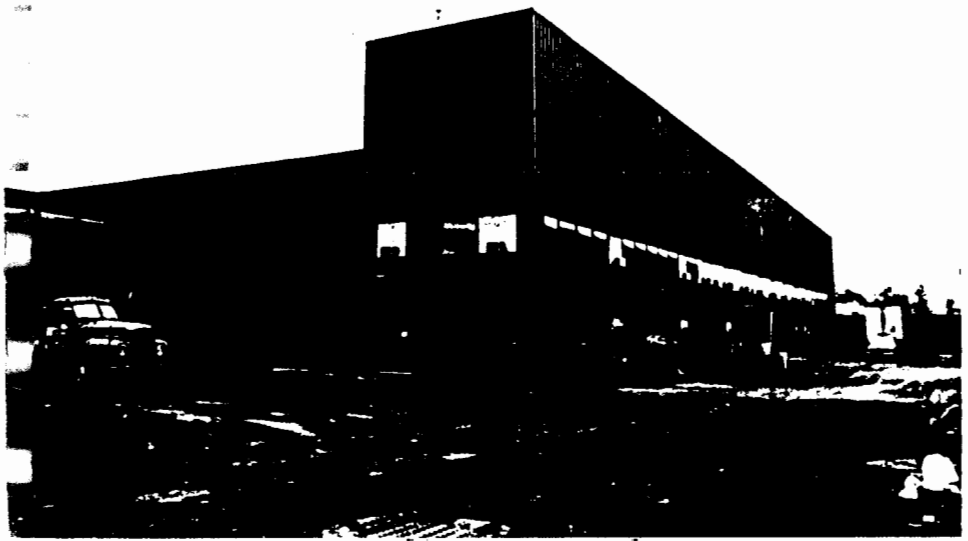


Front of Labs and Office Buildings

October, 1980

Court Yard between the Laboratories and the Office Building

October, 1980



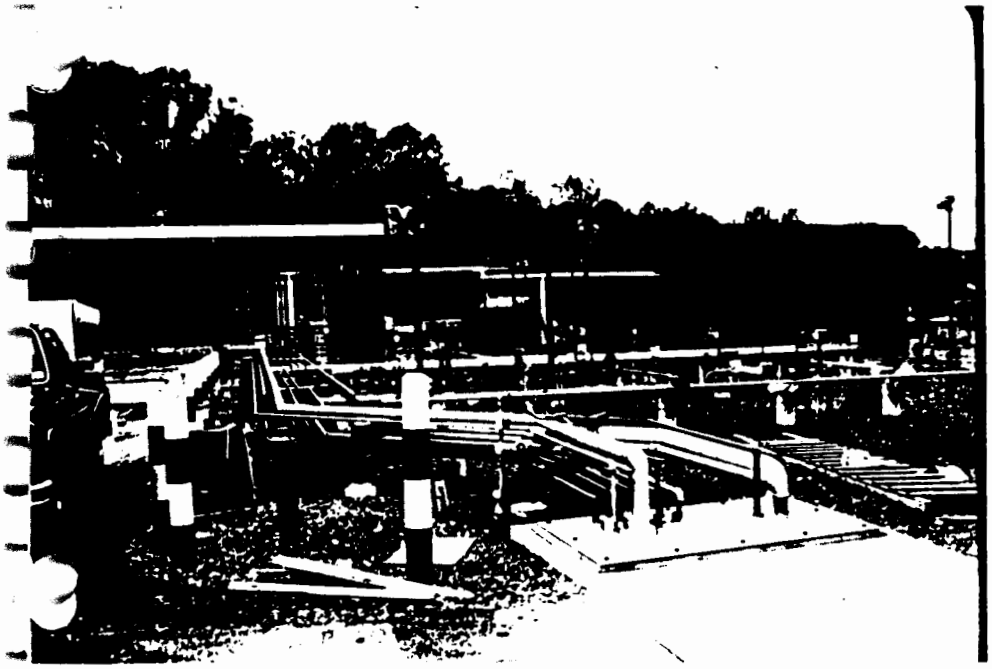
Pilot Unit Building at the rear of the Labs and Office Buildings

October, 1980

ARCO CHEMICAL COMP 'Y--3801 WEST CHESTER PIKE--NEWT' N SQUARE, PA 19073

Non-chemical waste water tanks which are pumped nightly to township sewage works

October, 1980



Underground hazardous waste storage tank (6,500 gal.) 8' dia. x 17'5"

October, 1980

Shipping and Receiving Department at the rear of the Labs and Office buildings

October, 1980

ARCO CHEMICAL COMP 'Y--3801 WEST CHESTER PIKE--NEWT' N SQUARE, PA 19073

Shop area at the rear of the Labs and Office Buildings

October, 1980

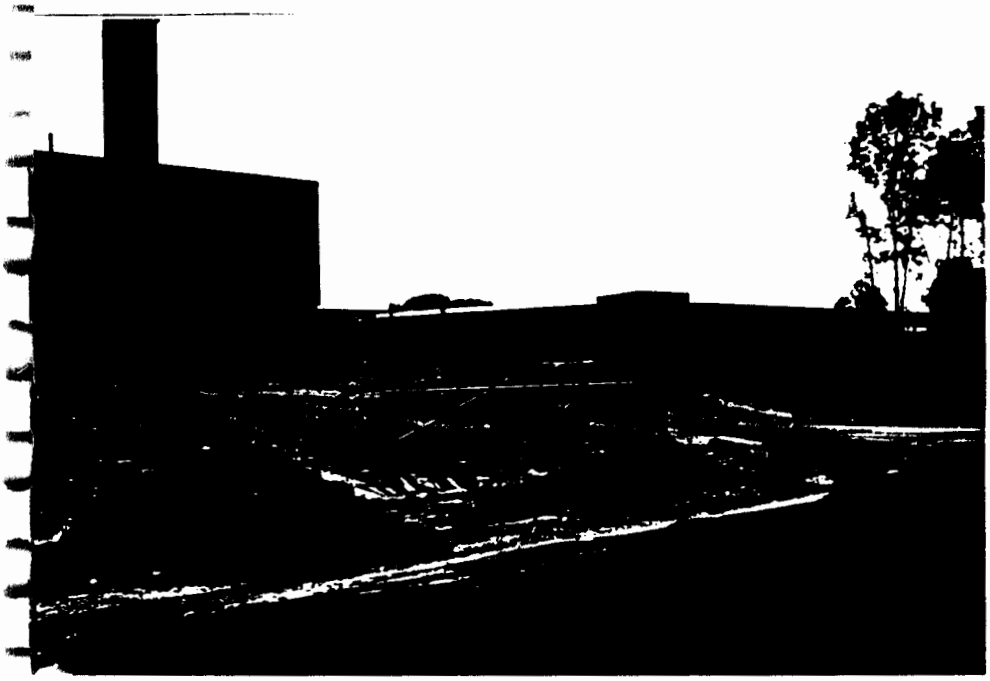
125,000 Gallon Fire Sprinkler Tank

October, 1980

Boiler House

October, 1980

ARCO CHEMICAL COMPANY--3801 WEST CHESTER PIKE--NEWTOWN SQUARE, PA 19073



Security Fence and Drum Storage area

90' x 226'

October, 1980

Closer view of Drum Storage area

October, 1980

Inside view of above Drum Storage area displaying fire sprinkler system, concrete floor and covering

October, 1980

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
6TH AND WALNUT STREETS
PHILADELPHIA, PENNSYLVANIA 19106

EPA I.D. # PAT 00 060 7770 February 3, 1981

Mr. Francis Greek
ARCO Chemical Company
Research & Engineering Center
3801 West Chester Pike
Newtown Square, PA 19073

Re: Acknowledgment of Application for a Hazardous Waste Permit

This is to acknowledge that the Environmental Protection Agency has received: (1) A notification pursuant to Section 3010 of the Resource Conservation and Recovery Act for the facility located at the address shown above; and (2) Part A of a Hazardous Waste Permit Application for that facility, including a signed statement that the operation of the facility, or its construction, began prior to November 19, 1980. While the information provided by these submissions has not been fully reviewed for completeness or accuracy, EPA will accept this information as an initial qualification for interim status pursuant to Section 3005 of the Act. If after further review of this information, EPA determines that the owner or operator did not fulfill all the requirements for interim status, EPA may treat the owner or operator as not having qualified for interim status pursuant to that section and will advise the owner or operator of that determination. Facility owners and operators with interim status must comply with the standards set forth at 40 CFR Part 265 until a permit is issued. Interim status may be terminated if the owner or operator fails to furnish any additional information requested by EPA in order to process a permit application.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
6TH AND WALNUT STREETS
PHILADELPHIA, PENNSYLVANIA 19106

JUL 17 1981

Mr. J. E. Connor
Arco Chemical Company- Research & Eng. Ctr.
3801 West Chester Pike
Newtown Square, PA 19073

Dear Mr. Connor:

This is to acknowledge that the Environmental Protection Agency has completed processing the information submitted in your Part A Hazardous Waste Permit Application. It is the Agency's opinion, based on the assumption that the information submitted is complete and accurate, you as an owner or operator of a hazardous waste management facility have met the requirements of Section 3005(e) of the Resource Conservation and Recovery Act (RCRA) for Interim Status. EPA has not verified the information submitted. If it is determined that the information is incomplete or inaccurate, you may be asked to provide additional information or in certain circumstances it may be determined that you do not qualify for interim status. In addition, this notice does not preclude a citizen from taking legal action under the provisions of Section 7002 of RCRA.

A facility not meeting the requirements for interim status under Section 3005 of RCRA may be required to close until such time as a hazardous waste permit is issued. Interim status may also be terminated, according to procedures in 40 CFR Part 124, if the owner or operator fails to furnish additional information which EPA requests in order to process a permit application.

As an owner or operator of a hazardous waste management facility, you are required to comply with the interim status standards as prescribed in 40 CFR Parts 122 and 265 or with State rules and regulations in those States which have been authorized under Section 3006 of RCRA. In addition, you are reminded that operating under interim status does not relieve you from the need to comply with all applicable State and local requirements.

The enclosure to this letter identifies the processes your facility may use, their design capacities, and types of waste your facility may accept during interim status. This information was obtained from the Part A Permit Application. If you wish to handle new wastes, change processes, increase the design capacity of existing processes, or change ownership or operational control of the facility, you may do so only as provided in 40 CFR Sections 122.22 and 122.23.

If you have any questions concerning this letter, please write to the address shown or call Bill Walsh at 215/597-1230.

Sincerely yours,

Shirley D. Bulkin

Shirley D. Bulkin
Chief, Administrative Support Section
Permit Enforcement Branch

Enclosure

Date Prepared: Jul 17, 1981

The information shown below is based solely on the information that the owner and operator of this facility submitted in Part A of the Hazardous Waste Permit Application. This is not a determination by EPA that this facility is an environmentally acceptable facility for treating, storing or disposing of the hazardous wastes listed below.

I. Facility name, location, and EPA Identification Number.

Name: Arco Chemical Company - Research & Eng. Ctr.

Location: 3801 West Chester Pike
Newtown Square, PA 19073

EPA I.D. No.: PAT 00 060 7770

II. EPA considers the following to be the owner or operator of the facility and therefore the person(s) who must comply with the requirements set forth in 40 CFR Parts 122 and 265.

Owner's Name: Mr. J. E. Connor-Vice President Reserach & Deveolpment

Operator's Name:

III. During the period of interim status, the facility may use only the following processes for treating, storing or disposing of hazardous waste, up to the design capacities that are indicated.

PROCESS	DESIGN CAPACITY
S01	100,000 Gals.
S02	6,500 Gals.
T03	20 Gals/Hr.

IV. During the period of interim status, the facility may handle only the hazardous wastes with the following EPA Hazardous Waste Numbers, and/or solid waste exhibiting hazardous characteristics with the following EPA Hazardous Waste Numbers.

* See Attachment

(from page 2.
Photocopy this page before completing if you have more than 26 wastes to list.

Form Approved OMB No. 158-S80004

EPA I.D. NUMBER (enter from page 1)

P	A	T	0	0	0	6	0	7	7	7	0	T/A	C
													1

FOR OFFICIAL USE ONLY

												T/A	C	
W	D	U	P										2	DUP

DESCRIPTION OF HAZARDOUS WASTES (continued)

A. EPA HAZARD. WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES 1. PROCESS CODES (enter)	D. PROCESSES 2. PROCESS DESCRIPTION (If a code is not entered in D(1))
F003	60	T	S01	
F005				Included with above
D002	223	T	S01	
D010				Included with above
D001	70	T	S01	
002				Included with above
D003				Included with above
D010				Included with above
D001	164	T	S02T03*	
D001	120	T	S01T03*	
D002	20	T	S01	
F004	133	T	S01T03*	
D010				Included with above
				*see additional information - Attachment I

EPA Form 3510-3 (6-80)

CONTINUE ON REVERSE

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
6TH AND WALNUT STREETS
PHILADELPHIA, PENNSYLVANIA 19106

Certified Mail
Return Receipt Requested

December 30, 1981

Mr. J. E. Connor
Arco Chemical Company-Research & Eng. Ctr.
3801 West Chester Pike
Newtown Square, PA 19073

Re: EPA Identification Numbers
Facility Location: 3801 West Chester Pike
Newtown Square, PA 19073

Dear Mr. Connor:

Shortly after the filing of a Notification of Hazardous Waste Activity form (EPA-8700-12) with the EPA for the above facility, a temporary identification number PAT 00 060 7770 was issued in order to expedite the issuance of I.D. numbers.

A permanent identification number PAD 04 653 8211 has now been assigned for your facility. Realizing that you might have a supply of Manifest forms printed with the temporary number and you may have to contact companies with which you deal, you are permitted to use the temporary number for up to six months. You may, however, start using your permanent number immediately.

It is requested that you let this office know, within 30 days of receipt of this letter, the date you intend to implement the use of the new permanent EPA Identification Number by contacting Joan Henry, a member of my staff, on 215-597-8751 or by writing to: EPA, 6th & Walnut Streets, Philadelphia, PA 19106, Attn: Shirley Bulkin (3EN24). With this information we will have an accurate record of your I.D. number and be able to avoid possible confusion.

Sincerely yours,

Shirley D. Bulkin
Chief, RCRA Administrative Support Section
Permit Enforcement Branch

cc:

Mr. Gary Galida
Dept. of Environmental Resources -PA

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
1875 New Hope Street
Norristown, PA 19401
215 631-2420

February 16, 1983

Mr. Francis Greek
Manager of Personnel and Site
ARCO Chemical Company
Research and Engineering Center
3801 West Chester Pike
Newtown Square, PA 19073

Re: EPA Identification No. PAT 000607770
Facility Name: ARCO Chemical Company
Research and Engineering Center
3801 West Chester Pike

Dear Newtown Square, PA 19073:

This letter constitutes a formal request for Part B of your application for Hazardous Waste Management Facility Permit under the Hazardous Waste Management Regulations, 25 PA Code Chapter 75, Subchapter D, for the facility referred above. This request is made under the authority of Section 75.265(z)(6) of the regulations. You should refer to the hazardous waste management regulations that appeared in the Pennsylvania Bulletin dated September 4, 1982, which was recently mailed to you for the requirements of the Part B application. Your Part B application must be submitted no later than September 1, 1983. If there is information that is being claimed as confidential, indicate this according to the requirements of Section 75.265(z)(16).

If your facility is not a TSD (treatment, storage or disposal site), or if you stopped functioning as a TSD facility after November 19, 1980, or if you qualify under the Permit by Rule provision of the regulations, it will be necessary for you to contact one of our field offices, and to arrange for an inspection to confirm this. Our field offices and the areas covered are the Bethlehem Office, phone number 861-2070, covering Berks, Lehigh and Northampton Counties; and the Norristown Office, phone number 631-2420, covering Philadelphia, Bucks, Chester, Delaware and Montgomery Counties.

If you functioned as a TSD after November 19, 1980, it will be necessary for you to submit four copies of a closure plan to Mr. Bruce Beitler of this office.

Enclosed are reference checklists for your Part B application that are to be used to insure your application contains the minimum information required. These checklists are to be used to assist you in your Part B application and our subsequent review, although the checklists are not a substitute for reviewing and addressing the hazardous waste regulations themselves. Because you may be anticipating additional facilities at your location, we have included checklists for every type of facility covered by the Department requirements. Please use only those checklists that apply to the types of facilities for which you are making application.

Your Part B application will be reviewed for a hazardous waste management TSD Permit by both the U. S. Environmental Protection Agency and the Department of Environmental Resources until the Commonwealth of Pennsylvania receives Phase II Interim Authorization under the RCRA Program to solely administer a permitting program.

You should submit the Part B application to both agencies for their concurrent review. This would require that the hazardous waste requirements under Pennsylvania regulations as well as the hazardous waste management requirements under the Federal program would have to be addressed.

When completed, please transmit your application and five copies (or seven copies if there is an incineration facility) to our office, and if you have any questions or desire to have a pre-application conference, please contact Mr. Lawrence H. Lunsk, Solid Waste Facilities Supervisor, at the letterhead address, or by calling 215 631-2420.

Very truly yours,

WAYNE L. LYNN
Regional Solid Waste Manager

Re P770

ENCLOSURE

ARCO Chemical Comp:
2801 West Chester
Newtown Square,
Telephone 215
F. J. Greek
Manager,

February 6, 1984

Ms. Joanne Cassidy
3HW32
EPA Region 3
6th and Walnut Streets
Philaelphia, Pennsylvania 19106

Dear Ms. Cassidy:

As per our phone conversation please find another copy of my correspondence to the within mentioned departments and locations.

I hope this will complete your records.

Sincerely

Francis J. Greek

FJG/lmm

Attachment

New...
Telephone 215 359 2...

F. J. Greek

August 11, 1983

Mr. Wayne L. Lynn
Regional Solid Waste Manager
Commonwealth of Pennsylvania
Department of Environmental Resources
1875 New Hope Street
Norristown, Pennsylvania 19401

Re: ARCO Chemical Company
I. D. No. PAD 046 538 211

Dear Mr. Lynn:

This letter acknowledges receipt of correspondence dated February 16, 1983 from the Bureau of Solid Waste Management requesting submission of our Part B permit application for a drum storage area. Our original application (Part A) was submitted to obtain Interim Status for operation of a drum storage area where both hazardous and non-hazardous chemical wastes are accumulated for subsequent shipment off-site for treatment or disposal.

After careful consideration, we have determined that it is not necessary to store hazardous waste material on-site for longer than 90 days. Therefore, we will not be submitting a Part B application for the drum storage area.

Effective September 1, 1983, we request that further processing of our application be terminated. In the interim, we will arrange for shipment of accumulated hazardous wastes in storage and revise facility administrative procedures to ensure compliance with the provisions of 25 Pa. Code Chapter 75, Section 75.262.

We also request that your files on our facility be updated to reflect a change in our identification number assigned by EPA, Region III. Effective April 1, 1982, Identification No. PAD 046 538 211 was assigned to this facility which replaces PAT 000 607 470.

Should you have any questions, please contact me at (215) 359-2013.

Very truly yours,

Francis J. Greek
Manager, Facility Services

FJG/jcb

cc: Pennsylvania Department of Environmental Resources
Bureau of Solid Waste Management
Division of Hazardous Waste
P. O. Box 2063
Harrisburg, PA 17120

Ms. Shirley D. Bulkin, Chief (3EN24)
RCRA Administrative Support Section
Permit Enforcement Branch
U. S. Environmental Protection Agency
Region III
6th & Walnut Streets
Philadelphia, PA 19106

bcc: H. E. Birr
D. R. Fitts
V. P. Wynne
E. D. Shuster
Dr. J. E. Connor
B. E. Therrien

[GREEK/DER.1]

ARCO Chemical Company
3801 West Chester Pike
Newtown Square, Pennsylvania 19073
Telephone 215 359 2013

F. J. Greek

August 11, 1983

Mr. Wayne L. Lynn
Regional Solid Waste Manager
Commonwealth of Pennsylvania
Department of Environmental Resources
1875 New Hope Street
Norristown, Pennsylvania 19401

Re: ARCO Chemical Company
I. D. No. PAD 046 538 211

Dear Mr. Lynn:

This letter acknowledges receipt of correspondence dated February 16, 1983 from the Bureau of Solid Waste Management requesting submission of our Part B permit application for a drum storage area. Our original application (Part A) was submitted to obtain Interim Status for operation of a drum storage area where both hazardous and non-hazardous chemical wastes are accumulated for subsequent shipment off-site for treatment or disposal.

After careful consideration, we have determined that it is not necessary to store hazardous waste material on-site for longer than 90 days. Therefore, we will not be submitting a Part B application for the drum storage area.

Effective September 1, 1983, we request that further processing of our application be terminated. In the interim, we will arrange for shipment of accumulated hazardous wastes in storage and revise facility administrative procedures to ensure compliance with the provisions of 25 Pa. Code Chapter 75, Section 75.262.

We also request that your files on our facility be updated to reflect a change in our identification number assigned by EPA, Region III. Effective April 1, 1982, Identification No. PAD 046 538 211 was assigned to this facility which replaces PAT 000 607 470.

Should you have any questions, please contact me at (215) 359-2013.

Very truly yours,

Francis J. Greek
Manager, Facility Services

FJG/jcb

cc: Pennsylvania Department of Environmental Resources
Bureau of Solid Waste Management
Division of Hazardous Waste
P. O. Box 2063
Harrisburg, PA 17120

Ms. Shirley D. Bulkin, Chief (3EN24)
RCRA Administrative Support Section
Permit Enforcement Branch
U. S. Environmental Protection Agency
Region III
6th & Walnut Streets
Philadelphia, PA 19106

[GREEK/DER.1]

ARCO Chemical Company
3801 West Chester Pike
Newtown Square, Pennsylvania 19073
Telephone 215 359 2013

F. J. Greek
Manager, Facility Services

January 23, 1986

Commonwealth of Pennsylvania
Department of Environmental Resources
Bureau of Solid Waste Management
P.O. Box 2063
Harrisburg, PA 17120

Dear Sir:

RE: Notification of Waste Fuel Activities

Attached is our notification form required by 40 CFR 266.34(e) covering our waste fuel activities.

We have also used this opportunity to update the description of wastes that are generated at our facility.

Very truly yours,

Francis J. Greek

lmm

Attachment

cc: Mr. Wayne L. Lynn
Regional Solid Waste Manager
Commonwealth of Pennsylvania
Department of Environmental Resources
1875 New Hope Street
Norristown, PA 19401

U.S. Environmental Protection Agency
RCRA Adminstrator Branch
Region III
6th and Walnut Street
Philadelphia, PA 19106

Please print or type with ELITE type (12 characters per inch) in the unshaded areas only.

Form Approved. OMB No. 2050-0028. Expires 9-30-88
GSA No. 0246-EPA-AF

United States Environmental Protection Agency
Washington, DC 20460

EPA Notification of Hazardous Waste Activity

Please refer to the *Instructions for Filing Notification* before completing this form. The information requested here is required by law (Section 3010 of the Resource Conservation and Recovery Act).

For Official Use Only

Comments

C

Installation's EPA ID Number	T/A	C	Approved	Date Received (yr. mo. day)
F PAD046538211		1		860130

I. Name of Installation

ARCO CHEMICAL COMPANY

II. Installation Mailing Address

Street or P.O. Box

3801 West Chester Pike

City or Town	State	ZIP Code
Newtown Square	PA	19073

III. Location of Installation

Street or Route Number

same

City or Town	State	ZIP Code

IV. Installation Contact

Name and Title (last, first, and job title)	Phone Number (area code and number)
Greek F J Mgr Fac Sv	215 359 2013

V. Ownership

A. Name of Installation's Legal Owner	B. Type of Ownership (enter code)
Atlantic Richfield Co	P

VI. Type of Regulated Waste Activity *(Mark 'X' in the appropriate boxes. Refer to instructions.)*

A. Hazardous Waste Activity

- [X] 1a. Generator
- [ ] 1b. Less than 1,000 kg./mo.
- [ ] 2. Transporter
- [ ] 3. Treater/Storer/Disposer
- [ ] 4. Underground Injection
- [ ] 5. Market or Burn Hazardous Waste Fuel *(enter 'X' and mark appropriate boxes below)*
  - [X] a. Generator Marketing to Burner
  - [ ] b. Other Marketer
  - [ ] c. Burner

B. Used Oil Fuel Activities

- [ ] 6. Off-Specification Used Oil Fuel *(enter 'X' and mark appropriate boxes below)*
  - [ ] a. Generator Marketing to Burner
  - [ ] b. Other Marketer
  - [ ] c. Burner
- [ ] 7. Specification Used Oil Fuel Marketer (Or On-Site Burner) Who First Claims the Oil Meets the Specification.

RECEIVED
PA S ION
JAN 28 1986
EPA, R3

VII. Waste Fuel Burning: Type of Combustion Device *(enter 'X' in all appropriate boxes to indicate type of combustion device(s) in which hazardous waste fuel or off-specification used oil fuel is burned. See instructions for definitions of combustion devices.)*

- [ ] A. Utility Boiler
- [ ] B. Industrial Boiler
- [ ] C. Industrial Furnace

VIII. Mode of Transportation *(transporters only — enter 'X' in the appropriate box(es))*

- [ ] A. Air
- [ ] B. Rail
- [ ] C. Highway
- [ ] D. Water
- [ ] E. Other *(specify)*

IX. First or Subsequent Notification

Mark 'X' in the appropriate box to indicate whether this is your installation's first notification of hazardous waste activity or a subsequent notification. If this is not your first notification, enter your installation's EPA ID Number in the space provided below.

- [ ] A. First Notification
- [X] B. Subsequent Notification *(complete item C)*

C. Installation's EPA ID Number: PAD046538211

ID — For Official Use Only															T/A	C
C																
W																1

IX. Description of Hazardous Wastes *(continued from front)*

A. Hazardous Wastes from Nonspecific Sources. Enter the four-digit number from 40 *CFR* Part 261.31 for each listed hazardous waste from nonspecific sources your installation handles. Use additional sheets if necessary.

1	2	3	4	5	6
F001	F002	F003	F004	F005	
7	8	9	10	11	12

B. Hazardous Wastes from Specific Sources. Enter the four-digit number from 40 *CFR* Part 261.32 for each listed hazardous waste from specific sources your installation handles. Use additional sheets if necessary.

13	14	15	16	17	18
19	20	21	22	23	24
25	26	27	28	29	30

C. Commercial Chemical Product Hazardous Wastes. Enter the four-digit number from 40 *CFR* Part 261.33 for each chemical substance your installation handles which may be a hazardous waste. Use additional sheets if necessary.

31	32	33	34	35	36
U169	U196	U105	U147	U012	U134
37	38	39	40	41	42
U223	U107	U122			
43	44	45	46	47	48

D. Listed Infectious Wastes. Enter the four-digit number from 40 *CFR* Part 261.34 for each hazardous waste from hospitals, veterinary hospitals, or medical and research laboratories your installation handles. Use additional sheets if necessary.

49	50	51	52	53	54

E. Characteristics of Nonlisted Hazardous Wastes. Mark 'X' in the boxes corresponding to the characteristics of nonlisted hazardous wastes your installation handles. *(See 40 CFR Parts 261.21 — 261.24)*

☒ 1. Ignitable *(D001)* ☒ 2. Corrosive *(D002)* ☒ 3 Reactive *(D003)* ☒ 4 Toxic *(D000)*

X. Certification

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Signature	Name and Official Title *(type or print)*	Date Signed
Francis J. Greek	Francis J. Greek Manager, Facility Services	11/24/86

EPA Form 8700-12 (Rev. 11-85) Reverse

BILLING CODE 6560-50-C

APPENDIX B

FILE: DEL. CO./ ARCO CHEMICAL

(L)

HAZARDOUS WASTE INSPECTION REPORT
Generators - Part A

of inspection 5/7/85 Time start 200 Time finish 330

e of inspector Robert Zang

pany, installation name Arco Chemical Co.

ation 3801 W. Chester Pike

nty Delaware Municipality Newtown Twp.

n fication number PAD046538211

e of responsible official Francis J. Greek

le Mgr. of Facility Services

l g address 3801 W. Chester Pike, Newtown Sqnare, PA-19073

e code and phone no. 215-359-2013

e of person interviewed None

e "

ling address (if different from above) "

code and phone no. "

Current waste handling method: N/A

a. ☐ On-site ☐ treatment, ☐ storage, ☐ disposal

b. ☐ On-site ☐ use, ☐ reuse, ☐ recycle, ☐ reclaim

c. ☐ Off-site ☐ treatment, ☐ storage, ☐ disposal

d. ☐ Off-site ☐ use, ☐ reuse, ☐ recycle, ☐ reclaim

Amount of hazardous waste produced:

a. 35,000 kg./mo.

b. 420,000 kg./yr.

Types of hazardous waste produced by Hazardous Waste Number:

D001-3 U105

F003-5

Are hazardous wastes transported off-site by the generator? ☐ Yes ☒ No

Generators - Part B

Arco Chemical

1-NON-COMPLIANCE, 2-COMPLIANCE, 3-NOT APPLICABLE, 4-NOT DETERMINED

2	3	4	REQUIREMENT	CH. CITA. 75.262
✓			Identification number	(c) (1)
✓			Hazardous waste shipments offered only to licensed transporters	(c) (4)
	✓		Authorization received from TSD facility for wastes shipped off-site	(d)
✓			PA manifest used for intrastate shipments	(e) (1) (
✓			Disposer state manifest or EPA format manifest used for out-of-state shipments	e) (1) (
✓			Manifests filled out properly and completely	(e) (1)
✓			Manifests routed properly ~~and within time limits (24 hours)~~	(e) (2)
	✓		Proper U.S. DOT shi ing containers or packages	(f) (1) (
	✓		Shipping containers marked and labeled according to U.S. DOT	f) (1) (i
✓			Containers of 100 gal. or less marked with required PA label	f) (1) (i
✓			Placards offered to transporter	(f) (2)
✓			Wastes accumulated on-site for less than 90 days	(g) (1)
	✓		Wastes stored in proper containers and properly marked and labeled	(g) (1) (
✓			Containers managed in accordance with 75.265(g)	(g) (1) (
✓			Containers clearly marked with accumulation date and visible for inspection	(g) (1) (
✓			Records retained at designated location for 20 years	(h)
✓			Quarterly reports submitted to the Department	(i)
	✓		Exception reporting procedures followed	(j)
✓			Hazardous waste disposal plan, if required	(l)
	✓		Spill reporting procedures followed	(m) (1)
		✓	Preparedness, Prevention and Contingency Plan approved and implemented	(m) (5)
	✓		Special requirements followed for international shipments	(o)
✓			Training program	(g)(f)(v)

HAZARDOUS WASTE INSPECTION REPORT
Part C - Comments

Arco Chemical

Generator is in compliance, based upon those items which could be determined. The PPC plan, which was sent to the Department on 3/12/85, will be reviewed in the near future.

This inspection report is official notification that a representative of the Department of Environmental Resources, Bureau of Solid Waste Management, inspected the above installation. The findings of this inspection are shown in this report. Any violations which were uncovered during the inspection are indicated. Violations may also be discovered upon examination of the results of laboratory analyses and review of Department records. Notification will be forthcoming, confirming any violations indicated hereon and listing any additional violations.

Person Interviewed (signature) Darren J. Hulk Date 5/7/85

Inspector (signature) Robert Long Date 5/7/85

File: Delaware Co. Arco Chemical Co (Newtown Square)

HAZARDOUS WASTE INSPECTION REPORT
Generators -Part A

Date of inspection 11-14-85 Time start 1:30 Time finish 3:30

Name of inspector Carol Kurtz

Company, installation name Arco Chemical Co.

Location 3801 West Chester Pike

County Delaware Municipality Newtown Twp.

Identification number PAD046538211

Name of responsible official James J Greic

Title Mgr. of Facility Services

Mailing address 3801 W. Chester Pike, Newtown Square Pa 19073

Area code and phone no. 215-359-2013

Name of person interviewed none

Title

Mailing address (if different from above)

Area code and phone no.

1. Current waste handling method:

a. ☐ On-site ☐ treatment, ☐ storage, ☐ disposal

b. ☐ On-site ☐ use, ☐ reuse, ☐ recycle, ☐ reclaim

c. ☒ Off-site ☐ treatment, ☐ storage, ☒ disposal

d. ☒ Off-site ☒ use, ☐ reuse, ☐ recycle, ☐ reclaim

2. Amount of hazardous waste produced:

a. 35,000 kg./mo.

b. 420,000 kg./yr.

3. Types of hazardous waste produced by Hazardous Waste Number:

D001 - D003 U105
F003 - F005 U147

4. Are hazardous wastes transported off-site by the generator? ☐ Yes ☒ No

HAZARDOUS WASTE INSPECTION REPORT
Generators - Part B

Arco Chemical 11-14-85

1- NON-COMPLIANCE, 2- COMPLIANCE, 3- NOT APPLICABLE, 4- NOT DETERMINED

COMPLIANCE STATUS 1	2	3	4	REQUIREMENT	CHAPTER CITATION 75.262
	X			Identification number	(c).(1)
	X			Hazardous waste shipments offered only to licensed transporters	(c) (4)
	X			Authorization received from TSD facility for wastes shipped off-site	(d)
	X			PA manifest used for intrastate shipments	(e) (1) (i
	X			Disposer state manifest or EPA format manifest used for out-of-state shipments	(e) (1) (ii
	Y			Manifests filled out properly and completely	(e) (1)
	X			Manifests routed properly and within time limits (24 hours)	(e) (2)
				Proper U.S. DOT shipping containers or packages	(f) (1) (i
	X			Shipping containers marked and labeled according to U.S. DOT	(f) (1) (ii)
	X			Containers of 110 gal. or less marked with required PA label	(f) (1) (ii
	X			Placards offered to transporter	(f) (2)
	X			Wastes accumulated on-site for less than 90 days	(g) (1)
	X			Wastes stored in proper containers and properly marked and labeled	(g) (1) (i
	X			Containers managed in accordance with 75.265(g)	(g) (1) (i
	X			Containers clearly marked with accumulation date and visible for inspection	(g) (1) (i
				Records retained at designated location for 20 years	(h)
	X			Quarterly reports submitted to the Department	(i)
	X			Exception reporting procedures followed	(j)
	X			Hazardous waste disposal plan, if required	(l)
	X			Spill reporting procedures followed	(m) (1)
			X	Preparedness, Prevention and Contingency Plan approved and implemented	(m) (5)
		X		Special requirements followed for international shipments	(o)
	X			Personnel training program 265	(f)
	X			Personnel training program annual review 265	(f) (5)
	X			Drums labled during storage to accurately identify contents Act 97 Section 403	(b) (2)
	X			Facility operated to minimize the possibility of fire, explosion, or discharge of HW to air, soil, surface water, or ground water	265 (h)

Part C - Comments

Date of Inspection 11-14-85 Identification Number PAD046538211

Company, Installation Name Arco Chemical Co

County Delaware Municipality Newtown Twp.

At the time of this inspection no violations were found. The facility is in compliance.

This inspection report is official notification that a representative of the Department of Environmental Resources, Bureau of Solid Waste Management, inspected the above installation. The findings of this inspection are shown in this report. Any violations which were uncovered during the inspection are indicated. Violations may also be discovered upon examination of the results of laboratory analyses and review of Department records. Notification will be forthcoming, confirming any violations indicated herein and listing any additional violations.

Person Interviewed (signature) [signature] Date 11/14/85

Inspector (signature) [signature] Date 11-14-85

FILE: DELAWARE CO. ARCO CHEMICAL CO.

HAZARDOUS WASTE INSPECTION REPORT
Generators -Part A

Date of inspection June 6, 1986 Time start 9 am Time finish _____

Name of inspector Carol Kurtz

Company, installation name Arco Chemical Co

Location 3801 West Chester Pike

County Delaware Municipality Newtown Twp

Identification number PAD 041053811

Name of responsible official Francis J. Greco

Title Mgr. of Facility Services

Mailing address 3801 W Chester Pike, Newtown Square Pa 19073

Area code and phone no. 215-359-2013

Name of person interviewed Jane

Title _____

Mailing address (if different from above) _____

Area code and phone no. _____

1. Current waste handling method:

   a. ☐ On-site ☐ treatment ☐ storage, ☐ disposal

   b. ☐ On-site ☐ use, ☐ reuse, ☐ recycle, ☐ reclaim

   c. ☒ Off-site ☐ treatment, ☐ storage, ☒ disposal

   d. ☒ Off-site ☒ use, ☐ reuse, ☐ recycle, ☐ reclaim

2. Amount of hazardous waste produced:

   a. 35,000 kg./mo.

   b. 420,000 kg./yr.

3. Types of hazardous waste produced by Hazardous Waste Number:

   D001-D003 D005 D009, D011
   F003-F005 U147 P030

4. Are hazardous wastes transported off-site by the generator? ☐ Yes ☒ No

HAZARDOUS WASTE INSPECTION REPORT
Generators - Part B

1- NON-COMPLIANCE, 2- COMPLIANCE, 3- NOT APPLICABLE, 4- NOT DETERMINED

COMPLIANCE STATUS				REQUIREMENT	CHAPTER CITATION
1	2	3	4		75.262
	X			Identification number	(c)(1)
	X			Hazardous waste shipments offered only to licensed transporters	(c).(4)
	X			Authorization received from TSD facility for wastes shipped off-site	(d)
	X			PA manifest used for intrastate shipments	(e)(1)(i
	X			Disposer state manifest or EPA format manifest used for out-of-state shipments	(e)(1)(i
	X			Manifests filled out properly and completely	(e)(1)
	X			Manifests routed properly and within time limits (24 hours)	(e)(2)
	X			Proper U.S. DOT shipping containers or packages	(f)(1)(i
	X			Shipping containers marked and labeled according to U.S. DOT	(f)(1)(i
	X			Containers of 110 gal. or less marked with required PA label	(f)(1)(i
	X			Placards offered to transporter	(f)(2)
	X			Wastes accumulated on-site for less than 90 days	(g)(1)
	X			Wastes stored in proper containers and properly marked and labeled	(g)(1)(i
	X			Containers managed in accordance with 75.265(g)	(g)(1)(i
	X			Containers clearly marked with accumulation date and visible for inspection	(g)(1)(i
	X			Records retained at designated location for 20 years	(h)
	X			Quarterly reports submitted to the Department	(i)
	X			Exception reporting procedures followed	(j)
	X			Hazardous waste disposal plan, if required	(l)
	X			Spill reporting procedures followed	(m)(1)
	X			Preparedness, Prevention and Contingency Plan approved and implemented	(m)(5)
		X		Special requirements followed for international shipments	(o)
	X			Personnel training program 265	(f)
	X			Personnel training program annual review 265	(f)(5)
	X			Drums labled during storage to accurately identify contents Act 97 Section 403	(b)(2
	X			Facility operated to minimize the possibility of fire, explosion, or discharge of HW to air, soil, surface water, or ground water	265 (h)

HAZARDOUS WASTE INSPECTION REPORT
Part C - Comments

ate of Inspection June 6 1986 Identification Number PAD046531211

Company, Installation Name Orsa Chemical Co

ounty Delaware Municipality Newtown Twp.

At the time of this inspection no violations were observed.

NOTE: Several drums which were recently (6-3-86) declared waste have not been labeled. This is being corrected immediately.

This inspection report is official notification that a representative of the Department of nvironmental Resources, Bureau of Solid Waste Management, inspected the above installation. he findings of this inspection are shown in this report. Any violations which were uncovered during the inspection are indicated. Violations may also be discovered upon examination of he results of laboratory analyses and review of Department records. Notification will be orthcoming, confirming any violations indicated herein and listing any additional violations.

erson Interviewed (signature) Daniel J. Luck Date 6/6/86

Inspector (signature) Carl Kurtz Date 6-6-86

Regional File

HAZARDOUS WASTE INSPECTION REPORT
Generators - Part A

Date of inspection August 19, 1987 Time start 1:00 Time finish 3:00

Name of inspector Brian K. Boyd

Company, installation name ARCO Chemical Co.

Location 3801 West Chester Pike

County Delaware Municipality Newtown Twp.

Identification number PAD 046538411

Name of responsible official Jim Vorachek

Title Manager, Gas Chromatography & Online Analysis, Manufact Support

Mailing address 3801 West Chester Pike, Newtown Square, Pa. 19073

Area code and phone no. (215) 359-2373

Name of person interviewed Jim Vorachek

Title same

Mailing address (if different from above) _____

Area code and phone no. _____

1. Current waste handling method:

   a. ☐ On-site ☐ treatment, ☐ storage, ☐ disposal

   b. ☐ On-site ☐ use, ☐ reuse, ☐ recycle, ☐ reclaim

   c. ☒ Off-site ☐ treatment, ☐ storage, ☒ disposal

   d. ☐ Off-site ☐ use, ☐ reuse, ☐ recycle, ☐ reclaim

2. Amount of hazardous waste produced:

   a. 1986 Average 86 tons/quarter kg./mo.

   b. _____ kg./yr.

3. Types of hazardous waste produced by Hazardous Waste Number:
   D001-3 U105 D009, 11 Various others thru Lab Packs.
   F003-5 U147

4. Are hazardous wastes transported off-site by the generator? ☐ Yes ☒ No

HAZARDOUS WASTE INSPECTION REPORT
Generators - Part B

1 - NON-COMPLIANCE, 2 - COMPLIANCE, 3 - NOT APPLICABLE, 4 - NOT DETERMINED

COMPLIANCE STATUS				REQUIREMENT	CHAPTER CITATION
1	2	3	4		75.262
	✓			Identification number	(c)(1)
	✓			Hazardous waste shipments offered only to licensed transporters	(c)(4)
	✓			Authorization received from TSD facility for wastes shipped off-site	(d)
		✓		PA manifest used for intrastate shipments	(e)(1)(i)
	✓			Disposer state manifest or EPA format manifest used for out-of-state shipments	(e)(1)(ii
	✓			Manifests filled out properly and completely	(e)(1)
	✓			Manifests routed properly and within time limits (24 hours)	(e)(2)
	✓			Proper U.S. DOT shipping containers or packages	(f)(1)(i)
				Shipping containers marked and labeled according to U.S. DOT	(f)(1)(ii)
✓				Containers of 110 gal. or less marked with required PA label	(f)(1)(iii
			✓	Placards offered to transporter	(f)(2)
	✓			Wastes accumulated on-site for less than 90 days	(g)(1)
✓				Wastes stored in proper containers and properly marked and labeled	(g)(1)(ii
				Containers managed in accordance with 75.265(g)	(g)(1)(ii
✓				Containers clearly marked with accumulation date and visible for inspection	(g)(1)(iv
	✓			Records retained at designated location for 20 years	(h)
	✓			Quarterly reports submitted to the Department	(i)
		✓		Exception reporting procedures followed	(j)
		✓		Hazardous waste disposal plan, if required	(l)
		✓		Spill reporting procedures followed	(m)(1)
	✓			Preparedness, Prevention and Contingency Plan approved and implemented	(m)(3)
		✓		Special requirements followed for international shipments	(o)
	✓			Personnel training program 265	(f)
	✓			Personnel training program annual review 265	(f)(5)
✓				Drums labled during storage to accurately identify contents Act 97 Section 403	(b)(2)
	✓			Facility operated to minimize the possibility of fire, explosion, or discharge of HW to air, soil, surface water, or ground water	265 (b)

HAZARDOUS WASTE INSPECTION REPORT
Part C - Comments

te of Inspection Aug 19, 1987 Identification Number PAD046538011

mpany, Installation Name Arco Chemical Co.

unty Delaware Municipality Newtown Twp.

During this current inspection my observations were as follows:

1. All hazardous waste in the storage area should be labelled properly. Drums should be labeled as "Hazardous Waste" with the corresponding E.P.A. Hazardous Waste I.D. #.
2. There were several drums with no accumulation dates.
3. Drums should be stored in a manner so that labels are visible for inspection.

These conditions will be rectified within 1 working day.

is inspection report is official notification that a representative of the Department of vironmental Resources, Bureau of Solid Waste Management, inspected the above installation. e findings of this inspection are shown in this report. Any violations which were uncovered ring the inspection are indicated. Violations may also be discovered upon examination of e results of laboratory analyses and review of Department records. Notification will be coming, confirming any violations indicated herein and listing any additional violations.

rson Interviewed (signature) _____ Date 8/19/87

spector (signature) Brian K. Boyd Date 8/19/87

APPENDIX C

3801 West Chester Pike
Newtown Square, Pennsylvania 19073
Telephone 215 359 2000

October 16, 1989

Pennsylvania Department of Environmental Resources
Bureau of Solid Waste Management
Division of Hazardous Waste
P.O. Box 2063
Harrisburg, PA 17120

RE: Hazardous Waste Quarterly Report
ARCO Chemical Company
Newtown Square, PA 19073
ID No: PAD 046 538 211

Dear Sirs:

Attached is our "Hazardous Waste Quarterly Report" for the above facility. This report covers the period July 1, 1989 to September 30, 1989.

Should you have any questions about the information submitted in the report, please contact me at (215) 359-2437.

Very truly yours,

Larry R. Taylor
Manager,
Material Management

LRT/clp

Enclosure

cc: J.W. Chupein
M. Gelb
K.C. Ramey
G.C. Wolf
R. Cutler/CV
T. Senn

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
BUREAU OF SOLID WASTE MANAGEMENT

GENERATOR QUARTERLY HAZARDOUS WASTE REPORT

55A

I. Generator's EPA I.D. No. PAD 046 538 211
II. TSD Facility's EPA I.D. No. ALD 000 622 464
TSD Facility's Name Chemical Waste Management, Inc.
Address P.O. Box 55 Emelle, Alabama 35459

III. WASTE SHIPPED OFF-SITE

LINE	A. US DOT Proper Shipping Name of Waste and Manifest Document Number (Include State Abbreviation)	B. Hazardous Waste Number	C. Weight of Shipment	D. Pa. Hazardous Waste Transporter License No.
1	RQ Waste Flammable Liquid, n.o.s. Manifest Document Number- CWMA 363063	F003	6000 P	AH E756
2	RQ Waste Charcoal, Wood, Crushed, Flammable Solid Manifest Document Number- CWMA 363063	D001	1920 P	AH E756
3	Manifest Document Number-			AH
4	Manifest Document Number-			AH
5	Manifest Document Number-			AH
6	Manifest Document Number-			AH
7	Manifest Document Number-			AH
8	Manifest Document Number-			AH
9	Manifest Document Number-			AH
10	Manifest Document Number-			AH

E. Comments Manifest # CWMA 363063 contained 10000 P of non-regulated material, 3990 P of non-regulated material, 2400 P of non-regulated material, 1200 P of non-regulated material, 500 P of non-regulated material. Manifest # CWMA 355545 contained 22080 P of non-regulated material.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
BUREAU OF SOLID WASTE MANAGEMENT

GENERATOR QUARTERLY HAZARDOUS WASTE REPORT

55A

I. Generator's EPA I.D. No. PAD 046 538 211
II. TSD Facility's EPA I.D. No. NJD 002 182 897
TSD Facility's Name Safety Kleen Corp.
Address 1200 Sylvan St., Linden, NJ 07036

III. WASTE SHIPPED OFF-SITE

LINE	A. US DOT Proper Shipping Name of Waste and Manifest Document Number (Include State Abbreviation)	B. Hazardous Waste Number	C. Weight of Shipment	D. Pa. Hazardous Waste Transporter License No.
1	RQ Waste Flammable Liquid, n.o.s. Manifest Document Number- NJA 0557212	F003	4133 G	AH0315
2	Manifest Document Number-			AH
3	Manifest Document Number-			AH
4	Manifest Document Number-			AH
5	Manifest Document Number-			AH
6	Manifest Document Number-			AH
7	Manifest Document Number-			AH
8	Manifest Document Number-			AH
9	Manifest Document Number-			AH
10	Manifest Document Number-			AH

E. Comments

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
BUREAU OF SOLID WASTE MANAGEMENT

GENERATOR QUARTERLY HAZARDOUS WASTE REPORT

55A

I. Generator's EPA I.D. No. PAD 046 538 211
II. TSD Facility's EPA I.D. No. NJD 080 631 369
TSD Facility's Name Advanced Environmental Tech. Corp.
Address Goldmine Road, Mt. OLIVE, NJ 07836

III. WASTE SHIPPED OFF-SITE

LINE	A. US DOT Proper Shipping Name of Waste and Manifest Document Number (Include State Abbreviation)	B. Hazardous Waste Number	C. Weight of Shipment	D. Pa. Hazardous Waste Transporter License No.
1	RQ Waste Flammable Liquid, Poisonous **Manifest Document Number**- NJA 0655318	D001	1600 P	AH0095
2	Waste Acetic Acid, Glacial **Manifest Document Number**- NJA 0655318	D002	120 P	AH0095
3	Waste Toluene Diisocyanate **Manifest Document Number**- NJA 0655318	U223	80 P	AH0095
4	Waste Oil, n.o.s. **Manifest Document Number**- NJA 0655318	X726	40 P	AH0095
5	Waste Chemicals, n.o.s. **Manifest Document Number**- NJA 0655318	X910	80 P	AH0095
6	Waste Chemicals, n.o.s. **Manifest Document Number**- NJA 0655318	X900	40 P	AH0095
7	Waste Chemicals, n.o.s. **Manifest Document Number**- NJA 0655318	X900	40 P	AH0095
8	RQ Waste Flammable Liquid, n.o.s. **Manifest Document Number**- SC 00137	D001	800 P	AH0104
9	Waste Flammable Liquid, n.o.s. **Manifest Document Number**- SC 00137	F003	690 P	AH0104
10	Waste Flammable Liquid, n.o.s. **Manifest Document Number**- SC 00137	F003	460 P	AH0104

E. Comments

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
BUREAU OF SOLID WASTE MANAGEMENT

GENERATOR QUARTERLY HAZARDOUS WASTE REPORT

55A

I. Generator's EPA I.D. No. PAD 046 538 211
II. TSD Facility's EPA I.D. No. NJD 080 631 369
TSD Facility's Name Advanced Environmental Tech. Corp.
Address Goldmine Road, Mt. OLIVE, NJ 07836

III. WASTE SHIPPED OFF-SITE

LINE	A. US DOT Proper Shipping Name of Waste and Manifest Document Number (Include State Abbreviation)	B. Hazardous Waste Number	C. Weight of Shipment	D. Pa. Hazardous Waste Transporter License No.
1	Waste Flammable Liquid, n.o.s. **Manifest Document Number-** SC 00137	F005	290 P	AH0104
2	Waste Flammable Liquid, n.o.s. **Manifest Document Number-** SC 00137	D001	830 P	AH0104
3	Waste Flammable Liquid, Poisonous, n.o.s. **Manifest Document Number-** SC 00137	F003	115 P	AH0104
4	Waste Flammable Liquid, Poisonous, n.o.s. **Manifest Document Number-** SC 00137	F005	60 P	AH0104
5	Waste Corrosive Liquid, n.o.s. **Manifest Document Number-** SC 00137	D002	1200 P	AH0104
6	Waste Poison B Liquid, n.o.s. **Manifest Document Number-** SC 00137	U188	60 P	AH0104
7	RQ Waste, ORM-B, n.o.s. (Cupric Sulfate) **Manifest Document Number-** SC 00137	X850 6666	115 P	AH0104
8	Waste, ORM-A, n.o.s. **Manifest Document Number-** SC 00137	F002	1200 P	AH0104
9	Waste, ORM-A, n.o.s. **Manifest Document Number-** SC 00137	X900 6666	400 P	AH0104
10	Waste Combustible Liquid, n.o.s. **Manifest Document Number-** SC 00137	D001	115 P	AH0104

E. Comments

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
BUREAU OF SOLID WASTE MANAGEMENT

GENERATOR QUARTERLY HAZARDOUS WASTE REPORT

55A

I. Generator's EPA I.D. No. PAD 046 538 211
II. TSD Facility's EPA I.D. No. NJD 080 631 369
TSD Facility's Name Advanced Environmental Tech. Corp.
Address Goldmine Road. Mt. OLIVE. NJ 07836

III. WASTE SHIPPED OFF-SITE

LINE	A. US DOT Proper Shipping Name of Waste and Manifest Document Number (Include State Abbreviation)	B. Hazardous Waste Number	C. Weight of Shipment	D. Pa. Hazardous Waste Transporter License No.
1	Waste Chemicals, n.o.s. **Manifest Document Number**- SC 00137	X9000 7777	7600 P	AH0104
2	Waste Chemicals, n.o.s. **Manifest Document Number**- SC 00137	X8507 7777	175 P	AH0104
3	Waste Flammable Liquid, n.o.s. **Manifest Document Number**- SC 01104	D001	575 P	AH0104
4	Waste Flammable Liquid, n.o.s. **Manifest Document Number**- SC 01104	F005	60 P	AH0104
5	Waste Flammable Liquid, n.o.s. **Manifest Document Number**- SC 01104	F003	60 P	AH0104
6	Waste Flammable Liquid, Poisonous, n.o.s. **Manifest Document Number**- SC 01104	F003	115 P	AH0104
7	Waste Flammable Liquid, Poisonous, n.o.s. **Manifest Document Number**- SC 01104	D001	10 P	AH0104
8	Waste, Nitric Acid, 40% or Less **Manifest Document Number**- SC 01104	D002	20 P	AH0104
9	Waste, Corrosive Liquid, n.o.s. **Manifest Document Number**- SC 01104	D002	175 P	AH0104
10	Waste, Alkaline (Corrosive) Liquid, n.o.s. **Manifest Document Number**- SC 01104	D002	60 P	AH0104

E. Comments

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
BUREAU OF SOLID WASTE MANAGEMENT

GENERATOR QUARTERLY HAZARDOUS WASTE REPORT

55A

I. Generator's EPA I.D. No. PAD 046 538 211
II. TSD Facility's EPA I.D. No. NJD 080 631 369
TSD Facility's Name Advanced Environmental Tech. Corp.
Address Goldmine Road, Mt. OLIVE, NJ 07836

III. WASTE SHIPPED OFF-SITE

LINE	A. US DOT Proper Shipping Name of Waste and Manifest Document Number (Include State Abbreviation)	B. Hazardous Waste Number	C. Weight of Shipment	D. Pa. Hazardous Waste Transporter License No.
1	Waste, Arsenical Compound, Solid, n.o.s. **Manifest Document Number-** SC 01104	D004	10 P	AH0104
2	Waste, Poison B Liquid, n.o.s. **Manifest Document Number-** SC 01104	X8506666	175 P	AH0104
3	Waste, ORM-A, n.o.s. **Manifest Document Number-** SC 01104	F002	1600 P	AH0104
4	Waste, ORM-A, n.o.s. **Manifest Document Number-** SC 01104	X8506666	60 P	AH0104
5	Waste, Chemicals, n.o.s. **Manifest Document Number-** SC 01104	X8507777	175 P	AH0104
6	Waste, Chemicals, n.o.s. **Manifest Document Number-** SC 01104	X9007777	2800 P	AH0104
7	Waste, Chemicals, n.o.s. **Manifest Document Number-** SC 01104	X9007777	8800 P	AH0104
8	RQ Waste Flammable Liquid, Poisonous, n.o.s. **Manifest Document Number-** NJA 0653958	D001	800 P	AH0095
9	Waste Styrene Monomer, Inhibited **Manifest Document Number-** NJA 0653958	D001	2000 P	AH0095
10	RQ Waste Oxidizer, n.o.s. **Manifest Document Number-** NJA 0653958	D001	200 P	AH0095

E. Comments

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
BUREAU OF SOLID WASTE MANAGEMENT

GENERATOR QUARTERLY HAZARDOUS WASTE REPORT

55A

I. Generator's EPA I.D. No. PAD 046 538 211
II. TSD Facility's EPA I.D. No. NJD 080 631 369
TSD Facility's Name Advanced Environmental Tech. Corp.
Address Goldmine Road, Mt. OLIVE, NJ 07836

III. WASTE SHIPPED OFF-SITE

LINE	A. US DOT Proper Shipping Name of Waste and Manifest Document Number (Include State Abbreviation)	B. Hazardous Waste Number	C. Weight of Shipment	D. Pa. Hazardous Waste Transporter License No.
1	Waste Chemicals, n.o.s. **Manifest Document Number**- NJA 0653958	X910	200 P	AH0095
2	Waste Chemicals, n.o.s. **Manifest Document Number**- NJA 0653958	X910	60 P	AH0095
3	Waste Chemicals, n.o.s. **Manifest Document Number**- NJA 0653958	X910	1200 P	AH0095
4	Waste Chemicals, n.o.s. **Manifest Document Number**- NJA 0653958	X900	80 P	AH0095
5	Waste Pyrophoric Liquid, n.o.s. **Manifest Document Number**- NJA 0653877	D003	9 P	AH0095
6	Waste Flammable Liquid, Corrosive, n.o.s. **Manifest Document Number**- NJA 0653877	D001	62 P	AH0095
7	Waste Flammable Liquid, n.o.s. **Manifest Document Number**- NJA 0653877	D001	72 P	AH0095
8	Waste Methyl Chloroformate **Manifest Document Number**- NJA 0653877	U156	7 P	AH0095
9	Waste Vinylidene Chloride, Inhibited **Manifest Document Number**- NJA 0653877	U078	8 P	AH0095
10	Waste Methylmethacrylate, monomer, Inhibited **Manifest Document Number**- NJA 0653877	D001	14 P	AH0095

E. Comments

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
BUREAU OF SOLID WASTE MANAGEMENT

GENERATOR QUARTERLY HAZARDOUS WASTE REPORT

55A

I. Generator's EPA I.D. No. PAD 046 538 211
II. TSD Facility's EPA I.D. No. NJD 080 631 369
TSD Facility's Name Advanced Environmental Tech. Corp.
Address Goldmine Road, Mt. OLIVE, NJ 07836

III. WASTE SHIPPED OFF-SITE

LINE	A. US DOT Proper Shipping Name of Waste and Manifest Document Number (Include State Abbreviation)	B. Hazardous Waste Number	C. Weight of Shipment	D. Pa. Hazardous Waste Transporter License No.
1	Waste Perchloric Acid, exceeding 50% but not exceeding 72% strength **Manifest Document Number-** NJA 0653877	D001	12 P	AH0095
2	Waste Flammable Solid, n.o.s. **Manifest Document Number-** NJA 0653877	D001	141 P	AH0095
3	Waste Flammable Solid, Corrosive, n.o.s. **Manifest Document Number-** NJA 0653877	D001	8 P	AH0095
4	Waste Water Reactive Solid, n.o.s. **Manifest Document Number-** NJA 0653877	D003	13 P	AH0095
5	RQ Waste Flammable Solid, n.o.s. Nickel **Manifest Document Number-** NJA 0653877	D001	320 P	AH0095
6	Waste Boron Trichloride **Manifest Document Number-** NJA 0653877	D002	10 P	AH0095
7	**Manifest Document Number-**			AH
8	**Manifest Document Number-**			AH
9	**Manifest Document Number-**			AH
10	**Manifest Document Number-**			AH

E. Comments

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
BUREAU OF SOLID WASTE MANAGEMENT

GENERATOR QUARTERLY HAZARDOUS WASTE REPORT

55A

I. Generator's EPA I.D. No. PAD 046 538 211
II. TSD Facility's EPA I.D. No. NCD 980 842 132
TSD Facility's Name ECOFLO, Inc.
Address 2350 Patterson St., Greensboro, NC 27407

III. WASTE SHIPPED OFF-SITE

LINE	A. US DOT Proper Shipping Name of Waste and Manifest Document Number (Include State Abbreviation)	B. Hazardous Waste Number	C. Weight of Shipment	D. Pa. Hazardous Waste Transporter License No.
1	Chemical Process Liquid, n.o.s. Manifest Document Number- NJA 0670721	X900	1259 G	AH0067
2	Manifest Document Number-			AH
3	Manifest Document Number-			AH
4	Manifest Document Number-			AH
5	Manifest Document Number-			AH
6	Manifest Document Number-			AH
7	Manifest Document Number-			AH
8	Manifest Document Number-			AH
9	Manifest Document Number-			AH
10	Manifest Document Number-			AH

E. Comments

ARCO Chemical Company
3801 West Chester Pike
Newtown Square, Pennsylvania 19073
Telephone 215 359 2000

July 19, 1989

Pennsylvania Department of Environmental Resources
Bureau of Solid Waste Management
Division of Hazardous Waste
P.O. Box 2063
Harrisburg, PA 17120

RE: Hazardous Waste Quarterly Report
ARCO Chemical Company
Newtown Square, PA 19073
ID No: PAD 046 538 211

Dear Sirs:

Attached is our "Hazardous Waste Quarterly Report" for the above facility. This report covers the period April 1, 1989 to June 30, 1989.

Should you have any questions about the information submitted in the report, please contact me at (215) 359-2437.

Very truly yours,

Larry R. Taylor
Manager,
Material Management

LRT/clp

Enclosure

cc: J.W. Chupein
M. Gelb
K.C. Ramey
G.C. Wolf

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
BUREAU OF SOLID WASTE MANAGEMENT

GENERATOR QUARTERLY HAZARDOUS WASTE REPORT

55A

I. Generator's EPA I.D. No. PAD 046 538 211
II. TSD Facility's EPA I.D. No. NJD 002 182 897
TSD Facility's Name Safety Kleen Corp.
Address 1200 Sylvan St., Linden, NJ 07036

III. WASTE SHIPPED OFF-SITE

LINE	A. US DOT Proper Shipping Name of Waste and Manifest Document Number (Include State Abbreviation)	B. Hazardous Waste Number	C. Weight of Shipment	D. Pa. Hazardous Waste Transporter License No.
1	RQ Waste Flammable Liquid, nos Manifest Document Number- NJA 0557211	F003	3647 G	AH0278
2	Manifest Document Number-			AH
3	Manifest Document Number-			AH
4	Manifest Document Number-			AH
5	Manifest Document Number-			AH
6	Manifest Document Number-			AH
7	Manifest Document Number-			AH
8	Manifest Document Number-			AH
9	Manifest Document Number-			AH
10	Manifest Document Number-			AH

E. Comments

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
BUREAU OF SOLID WASTE MANAGEMENT

GENERATOR QUARTERLY HAZARDOUS WASTE REPORT

55A

I. Generator's EPA I.D. No. PAD 046 538 211
II. TSD Facility's EPA I.D. No. VAD 098 443 443
TSD Facility's Name Oldover Corporation
Address Route 1, State Route 652, Arvonia, VA 23004

III. WASTE SHIPPED OFF-SITE

LINE	A. US DOT Proper Shipping Name of Waste and Manifest Document Number (Include State Abbreviation)	B. Hazardous Waste Number	C. Weight of Shipment	D. Pa. Hazardous Waste Transporter License No.
1	RQ, Waste Flammable Liquid, nos Manifest Document Number- PAB 5716793	F005	4652 G	AH A125
2	Manifest Document Number-			AH
3	Manifest Document Number-			AH
4	Manifest Document Number-			AH
5	Manifest Document Number-			AH
6	Manifest Document Number-			AH
7	Manifest Document Number-			AH
8	Manifest Document Number-			AH
9	Manifest Document Number-			AH
10	Manifest Document Number-			AH

E. Comments

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
BUREAU OF SOLID WASTE MANAGEMENT

GENERATOR QUARTERLY HAZARDOUS WASTE REPORT

55A

I. Generator's EPA I.D. No. PAD 046 538 211
II. TSD Facility's EPA I.D. No. NCD 980 842 132
TSD Facility's Name ECOFLO, Inc.
Address 2350 Patterson St., Greensboro, NC 27407

III. WASTE SHIPPED OFF-SITE

LINE	A. US DOT Proper Shipping Name of Waste and Manifest Document Number (Include State Abbreviation)	B. Hazardous Waste Number	C. Weight of Shipment	D. Pa. Hazardous Waste Transporter License No.
1	Chemical Waste Liquid, nos Manifest Document Number- NJA 0560630	X900	2250 G	AH0067
2	Waste Flammable Solid, nos Manifest Document Number- PAB 6042713	D001 D003	10 P	AH0225
3	Waste Pyrophoric Liquid, nos Manifest Document Number- NYA 827583 3	D001 D003	250 P	AH0225
4	Waste Flammable Liquid, nos Manifest Document Number- NYA 827583 3	D001	250 P	AH0225
5	Waste Corrosive Solid, nos Manifest Document Number- NYA 827583 3	D002 D003	10 P	AH0225
6	Manifest Document Number-			AH
7	Manifest Document Number-			AH
8	Manifest Document Number-			AH
9	Manifest Document Number-			AH
10	Manifest Document Number-			AH

E. Comments

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
BUREAU OF SOLID WASTE MANAGEMENT

GENERATOR QUARTERLY HAZARDOUS WASTE REPORT

55A

I. Generator's EPA I.D. No. PAD 046 538 211
II. TSD Facility's EPA I.D. No. ALD 000 622 464
TSD Facility's Name Chemical Waste Management, Inc.
Address P.O. Box 55 Emelle, Alabama 35459

III. WASTE SHIPPED OFF-SITE

LINE	A. US DOT Proper Shipping Name of Waste and Manifest Document Number (Include State Abbreviation)	B. Hazardous Waste Number	C. Weight of Shipment	D. Pa. Hazardous Waste Transporter License No.
1	RQ Waste Charcoal, Wood, Crushed, Flammable Solid Manifest Document Number- CWMA 322773	D001	3360 P	AH E756
2	RQ Waste Flammable Solid, nos Manifest Document Number- CWMA 322773	F003	7275 P	AH E756
3	Manifest Document Number-			AH
4	Manifest Document Number-			AH
5	Manifest Document Number-			AH
6	Manifest Document Number-			AH
7	Manifest Document Number-			AH
8	Manifest Document Number-			AH
9	Manifest Document Number-			AH
10	Manifest Document Number-			AH

E. Comments Manifest # CWMA 322772 contained 18000 P of non-regulated material.
Manifest # CWMA 322773 contained 800 P of non-regulated material, 3000 P of non-regulated material, 3570 P of non-regulated material & 10000 P of non-regulated matl.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
BUREAU OF SOLID WASTE MANAGEMENT

GENERATOR QUARTERLY HAZARDOUS WASTE REPORT

55A

I. Generator's EPA I.D. No. PAD 046 538 211
II. TSD Facility's EPA I.D. No. NJD 080 631 369
TSD Facility's Name Advanced Environmental Tech. Corp.
Address Goldmine Road, Mt. OLIVE, NJ 07836

III. WASTE SHIPPED OFF-SITE

LINE	A. US DOT Proper Shipping Name of Waste and Manifest Document Number (Include State Abbreviation)	B. Hazardous Waste Number	C. Weight of Shipment	D. Pa. Hazardous Waste Transporter License No.
1	Waste Hydrazine, anhydrous Manifest Document Number- NJA 0479852	U133	11 P	AH0095
2	Waste Oxidizer, nos Manifest Document Number- NJA 0479852	D001	80 P	AH0095
3	Waste Oxidizer, Corrosive, Liquid, nos Manifest Document Number- NJA 0479852	D001	20 P	AH0095
4	Waste Nitric Acid (over 40%) Manifest Document Number- NJA 0479852	D001	20 P	AH0095
5	RQ Waste Oxidizer, poisonous, solid, nos (lead) Manifest Document Number- NJA 0479852	D001	20 P	AH0095
6	RQ Waste Alkaline (corrosive) Liquid, nos Manifest Document Number- NJA 0479852	D002	2000 P	AH0095
7	RQ Waste Alkaline (corrosive) Liquid, nos Manifest Document Number- NJA 0479852	D002	400 P	AH0095
8	RQ Waste Poison B Solid, nos Manifest Document Number- NJA 0479852	D010	50 P	AH0095
9	Waste Sodium Azide Manifest Document Number- NJA 0479852	P105	11 P	AH0095
10	RQ Waste Mercuric Chloride, solid Manifest Document Number- NJA 0479852	D009	10 P	AHD009

E. Comments

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1	Waste Flammable Liquid, Poisonous, nos Manifest Document Number- NJA 0479852	F005	20 P	AH0095
2	RQ Waste Poison B, solid, nos Manifest Document Number- NJA 0479852	D010	20 P	AH0095
3	Waste Chemicals, nos Manifest Document Number- NJA 0479852	X910	300 P	AH0095
4	RQ Waste Toluene Diisocyanate Manifest Document Number- NJA 0638713	U223	800 P	AH0095
5	Waste Maleic Anhydride Manifest Document Number- NJA 0638713	U147	100 P	AH0095
6	Waste Chemicals, nos Manifest Document Number- NJA 0638713	X910	80 P	AH0095
7	Waste Flammable Liquid, nos Manifest Document Number- SC 00132	F005	290 P	AH0104
8	Waste Flammable Liquid, nos Manifest Document Number- SC 00132	F003	575 P	AH0104
9	Waste Flammable Liquid, nos Manifest Document Number- SC 00132	F002	115 P	AH0104
10	Waste Flammable Liquid, nos Manifest Document Number- SC 00132	D001	120 P	AH0104

E. Comments

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1	RQ Waste Flammable Liquid, nos Manifest Document Number- SC 00132	D001	345 P	AH0104
2	Waste Allyl Alcohol Manifest Document Number- SC 00132	D001	20 P	AH0104
3	Waste Butylamine Manifest Document Number- SC 00132	D001	10 P	AH0104
4	Waste Trimethylamine Aqueous Solution Manifest Document Number- SC 00132	D001	10 P	AH0104
5	Waste Flammable Liquid, nos Manifest Document Number- SC 00132	F003	1050 P	AH0104
6	RQ Waste Flammable Liquid, nos Manifest Document Number- SC 00132	D001	400 P	AH0104
7	RQ Waste Flammable Liquid, nos Manifest Document Number- SC 00132	D001	2800 P	AH0104
8	Waste Flammable Liquid, Corrosive, nos Manifest Document Number- SC 00132	D001	30 P	AH0104
9	Waste Flammable Liquid, Corrosive, nos Manifest Document Number- SC 00132	F003	140 P	AH0104
10	Waste Flammable Liquid, Corrosive, nos Manifest Document Number- SC 00132	D001	360 P	AH0104

E. Comments

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LINE	A. US DOT Proper Shipping Name of Waste and Manifest Document Number (Include State Abbreviation)	B. Hazardous Waste Number	C. Weight of Shipment	D. Pa. Hazardous Waste Transporter License No.
1	Waste Corrosive Liquid, nos Manifest Document Number- SC 00132	D002	80 P	AH0104
2	RQ Waste Corrosive Liquid, nos Manifest Document Number- SC 00132	D002	230 P	AH0104
3	Waste Corrosive Liquid, nos Manifest Document Number- SC 00132	D002	60 P	AH0104
4	Waste Sulfuric Acid, spent Manifest Document Number- SC 00132	D002	20 P	AH0104
5	Waste Chromic Acid Solution Manifest Document Number- SC 00132	D002	10 P	AH0104
6	Waste Thionyl Chloride Manifest Document Number- SC 00132	D002	10 P	AH0104
7	Waste Acetic Acid (aqueous solution) Manifest Document Number- SC 00132	D002	30 P	AH0104
8	Waste Nitric Acid, 40% or less Manifest Document Number- SC 00132	D002	30 P	AH0104
9	Waste Sodium Hydroxide, liquid Manifest Document Number- SC 00132	D002	10 P	AH0104
10	Waste Alkaline (Corrosive) Liquid, nos Manifest Document Number- SC 00132	D002	30 P	AH0104

E. Comments

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TSD Facility's Name Advanced Environmental Tech. Corp.
Address Goldmine Road, Mt. OLIVE, NJ 07836

III. WASTE SHIPPED OFF-SITE

LINE	A. US DOT Proper Shipping Name of Waste and Manifest Document Number (Include State Abbreviation)	B. Hazardous Waste Number	C. Weight of Shipment	D. Pa. Hazardous Waste Transporter License No.
1	Waste Ammonium Hydroxide (Containing not less than 12% but not more than 44% ammonia) Manifest Document Number- SC 00132	D002	40 P	AH0104
2	RQ Waste Poison B Liquid, nos Manifest Document Number- SC 00132	D007	115 P	AH0104
3	Waste Poison B Liquid, nos Manifest Document Number- SC 00132	X850	60 P	AH0104
4	RQ Waste Poison B Solid, nos Manifest Document Number- SC 00132	D008	115 P	AH0104
5	RQ Waste Poison B Solid, nos Manifest Document Number- SC 00132	D006	60 P	AH0104
6	Waste ORM-A, nos Manifest Document Number- SC 00132	6666	800 P	AH0104
7	Waste ORM-A, nos Manifest Document Number- SC 00132	6666	440 P	AH0104
8	Waste ORM-A, nos Manifest Document Number- SC 00132	F002	800 P	AH0104
9	Waste Chemicals, nos Manifest Document Number- SC 00132	7777	160 P	AH0104
10	Waste Chemicals, nos Manifest Document Number- SC 00132	X850	405 P	AH0104

E. Comments

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LINE	A. US DOT Proper Shipping Name of Waste and Manifest Document Number (Include State Abbreviation)	B. Hazardous Waste Number	C. Weight of Shipment	D. Pa. Hazardous Waste Transporter License No.
1	Waste Chemicals, nos Manifest Document Number- SC 00132	7777	6800 P	AH0104
2	Waste Flammable Liquid, nos Manifest Document Number- NJA 0638714	D001	54 P	AH0095
3	Waste Styrene Monomer, inihibited Manifest Document Number- NJA 0638714	D001	17 P	AH0095
4	Waste Trimethylchlorosilane Manifest Document Number- NJA 0638714	D001	9 P	AH0095
5	Waste Diisopropyl Ether Manifest Document Number- NJA 0638714	D001	10 P	AH0095
6	Waste Flammable Liquid, Corrosive, nos Manifest Document Number- NJA 0638714	D001	18 P	AH0095
7	Waste Flammable Liquid, Poisonous, nos Manifest Document Number- NJA 0638714	D001	16 P	AH0095
8	Waste Flammable Solid, nos Manifest Document Number- NJA 0638714	D001	124 P	AH0095
9	Waste Water Reactive Solid, nos Manifest Document Number- NJA 0638714	D003	16 P	AH0095
10	Waste Sodium Metal Manifest Document Number- NJA 0638714	D003	8 P	AH0095

E. Comments

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LINE	A. US DOT Proper Shipping Name of Waste and Manifest Document Number (Include State Abbreviation)	B. Hazardous Waste Number	C. Weight of Shipment	D. Pa. Hazardous Waste Transporter License No.
1	Waste Corrosive Liquid, nos Manifest Document Number- NJA 0638714	D002	15 P	AH0095
2	Waste Aluminum Chloride, Anhydrous Manifest Document Number- NJA 0638714	D002	9 P	AH0095
3	Waste Phosphoric Anhydride Manifest Document Number- NJA 0638714	D002	8 P	AH0095
4	Waste Hydrazine, aqueous solution Manifest Document Number- NJA 0638714	D002	7 P	AH0095
5	RQ Waste Flammable Liquid, nos Manifest Document Number- NJAA 632500	D001	1800 P	AH0095
6	RQ Waste Flammable Liquid, Poisonous, nos Manifest Document Number- NJAA 632500	D001	6000 P	AH0095
7	RQ Waste Flammable Liquid, Poisonous, nos Manifest Document Number- NJAA 632500	D001	400 P	AH0095
8	RQ Waste Corrosive Liquid, nos Manifest Document Number- NJAA 632500	D002	400 P	AH0095
9	Waste Poison B Liquid, nos Manifest Document Number- NJAA 632500	C436	400 P	AH0095
10	Waste Flammable Solid, nos Manifest Document Number- NJA 0632723	D003	117 P	AH0095

E. Comments

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1	RQ Waste Cyanide Mixture, Dry Silver Cyanide Manifest Document Number- NJAA 632536	P104	60 P	AH0095
2	Waste Oxidizer, nos Manifest Document Number- NJAA 632536	D001	20 P	AH0095
3	Manifest Document Number-			AH
4	Manifest Document Number-			AH
5	Manifest Document Number-			AH
6	Manifest Document Number-			AH
7	Manifest Document Number-			AH
8	Manifest Document Number-			AH
9	Manifest Document Number-			AH
10	Manifest Document Number-			AH

E. Comments